

# MANUFACTURERS' RECORD.

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BALTIMORE, JULY 31, 1902.

\$4.00 A YEAR.  
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## Manufacturers' Record.

RICHARD H. EDMONDS, President.  
THOMAS P. GRASTY, Vice-President.

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THOMAS P. GRASTY,  
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BALTIMORE, JULY 31, 1902.

### COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

### FROM RICHMOND TO RUSSIA.

In a letter to the Manufacturers' Record the Richmond Supply Co. of Richmond, Va., writes:

We have received an order for our "Dura Asphalta" elastic roof paint from Odessa, Russia, directly attributed to our advertisement in the Manufacturers' Record, our customers having told us that they saw the advertisement in the Manufacturers' Record.

### THAT PUBLISHING SCHEME.

The would-be promoters of the gigantic Southern publishing house which has been in the air for six months are somewhat persistent in their efforts, which are worthy of a more practical and promising cause. Charleston and Atlanta have been mentioned as possible homes of the proposed plant, which is to give the South independence in the production of textbooks and other literature. The latest city to be mentioned in connection with it was Birmingham, Ala. To the officers of the Commercial Club of that city the proposition was made that Birmingham should raise \$150,000 of the capital stock of \$250,000, according to the Birmingham Age-Herald, and have the plant and the principal officers, or should raise \$50,000 and have the plant and some of the officers, and it was urged that the plant would be a great thing for Birmingham, as it would draw to that city a large number of persons interested in educational matters, and that the publication of books, about 1,000,000 being expected to be the product for the first year, would greatly advertise the city. The committee of the Commercial Club to whom the proposition was submitted in writing declined it unanimously, on the ground that this was not the time to put such an offer before the citizens. If the capital of the plant is to be but \$250,000, which is somewhat less than the original capital mentioned, and if it is expected upon that capital to equip a publishing house, to pay competent

authors and to manufacture 1,000,000 books in twelve months, it is not surprising that the offer did not appeal to the Commercial Club.

### SOUTHERN FERTILIZER PRODUCTS

In the United States \$60,685,753 are invested in the making of fertilizers as a distinct industry, employing 22,000 persons, using \$28,958,473 worth of material and producing to the value of \$44,657,385, which includes a certain amount of duplication. The values of the leading materials are bones, tankage, etc., \$9,766,755, phosphate rock \$3,554,174, potash salts \$3,008,400, acid phosphate \$2,176,245, sulphuric acid \$1,355,382, pyrites \$1,466,285, nitrate of soda \$709,841, kainit \$520,833 and fish \$183,542. South Carolina, Florida and Tennessee produce the bulk of the phosphate rock used in the United States, though the greater portion of this Southern product is exported. The South, in which was the pioneer manufacture of commercial fertilizers in this country, also produces the greater proportion of such fertilizers, by which are meant the manufactured products for the promotion of the growth of plants which do not need any further factory treatment, and which do not include raw phosphate rock, crude cottonseed, ordinary tankage or unground bone. The eminence of the South in this respect appears in the following table, which gives the number of establishments, including not only fertilizer works properly, but those which have fertilizers as by-products:

States.	Establishments.	Tons.	Value.
Maryland.....	42	386,133	\$5,213,925
Dist. Columbia..	7	3,859	76,480
Virginia.....	42	258,474	3,325,542
North Carolina..	29	139,582	1,727,270
South Carolina..	24	388,572	4,657,275
Georgia.....	45	278,982	3,331,469
Florida.....	7	26,144	496,642
Kentucky.....	4	17,315	295,520
Tennessee.....	5	93,054	1,464,788
Alabama.....	21	139,282	1,944,283
Mississippi.....	3	37,704	92,772
Louisiana.....	6	65,423	856,291
Total South....	236	1,834,524	\$25,882,167
Total U. S.....	478	2,887,904	\$42,697,673

South Carolina leads the country in the quantity of products, 388,572 tons, Maryland being second with 386,133 tons, Georgia third with 278,982 tons, Virginia fourth with 258,474 tons, and New Jersey fifth with 247,144 tons. Maryland leads in the value of the product, \$5,213,925, which is \$150,000 greater than the value of the combined products in Kentucky, Tennessee, Alabama, Mississippi and Louisiana; South Carolina is second in the value of products, \$4,657,275, New Jersey third with \$3,820,189, Georgia fourth with \$3,331,469, and Virginia fifth with \$3,325,542.

The Southeastern Cotton Buyers' Association is circulating among the ginners and planters of the South a notice that cotton spinners have been billing back to the cotton merchants the amount of excess bagging and ties above six yards and six bands to the bale, and that all buyers belonging to the association have agreed to put a

penalty of not less than fifty cents a bale on any bale that has an excess of bagging and bands. This looks like another reform in cotton baling traceable to the round-baling system.

### THE ANTI-TRUST STRAW ISSUE.

Signs are thickening that for the next three months, or until the congressional elections, the people of the United States, without respect of party, are to be diverted by a political farce. The word has gone forth from the artificers of what is known as the Voice of the People, and has been carried to the four quarters of the country, that the great issue in the fall campaign is to be Trusts. That is the fiat for both the so-called great parties, and politicians of high and low degree have already taken up the cry, to the obliteration of minor issues and the obscuration of greater ones. The trust of accurate definition has practically ceased to exist. That makes no difference. The word has about it a splendid smack for stump-speakers, and in their mouths may do just as well as any other word in the effort to befuddle fellow-citizens and confuse the careless or unthinking public mind. Interchangeable with Octopus and Upas tree, and appealing strongly to the superheated but shallow imagination, it will be the rallying cry for an assault at the polls upon aggregations of wealth without distinction, just as such assaults have been made in the past, to result, not in correction of evils, but in substituting one evil for another.

The assaults are to be led by two classes of politicians and on two general lines.

One set of agitators will be honest, but ignorant. They will sincerely believe, as they have believed before, that legislation may prevent the workings of economic law. They will forget that attempts of the kind have only suspended or temporarily perverted such operations to the detriment of mankind. They will again take rank with men of narrow vision, but intense convictions, who thought to bring the age of invention to an untimely end by smashing machinery.

The other class, neither ignorant nor honest, will seek to play upon the prejudices and the half-information of the many. They know that alarm is naturally felt at the tremendous and momentous developments in industry and transportation of recent years. They know that in politics it is easier and safer for the office-seeker and partisan to appeal to fears, to gullibility or to cupidity than to reason. Hence, instead of summoning to a sober discussion of fundamental principles, which, carried on persistently and without regard to popular clamour and without favor for privilege, would

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 54 and 55.

contribute immensely to a right solution of what is, indeed, a great problem, they will deliberately substitute words for ideas, vain promises for definite performances and demagoguery for statesmanship, and thus add to the fuel for the wrath which is to come, unless the inherent conservatism of the country shall assert itself promptly and vigorously, and, disregarding empty party names, shall administer a telling rebuke to the misleaders.

These demagogues of self-deception or of self-seeking, confined to no party, will either prate about an old standby which has done service in many an emergency for politicians, or will suggest a comparatively new remedy for the ills and menaces which their vigorous imagination will conjure up.

The new panacea is Publicity; the old, tariff reduction or tariff abolition. Publicity sounds well. It has already been tried to a limited extent in specious efforts to meet one phase of the combination problem. But to what has publicity amounted beyond nagging interference with interests and operations of manifold complexity, intelligently tangible only by experts, or beyond furnishing excuses for the existence of useless offices and supplying material for demagogic agitation?

The proposition to apply tariff reduction to the situation will be advanced, either by individuals who would be at a loss to justify their claims to office-holding statesmanship should they not be permitted to mouth time-frazzled platitudes about ideal theories utterly inapplicable for practical good to existing conditions, or by persons of intensely utilitarian instinct, who, having enjoyed the benefits of a protective tariff in building up wealth-creating industries, would now from their position of impregnable prestige seek for their own sole advantage to broaden and cheapen the basis of their supply of material at the expense of their countrymen just beginning to realize in industry upon such natural wealth. In the scramble for immediate gain they would forge the weapons for the ultimate injury of their fellows and themselves.

Both plans have the menace of damage not only to the so-called trusts, but to corporations and individuals unconnected with them. What arbitrary rule may be adopted for determining what is a trust or to what extent publicity may be pushed? Who is to decide how the manufactured products of a particular industrial combination are to be placed upon the free list in the tariff without crippling or destroying independent industries in the same field? Who is to explain why raw material, for example, sugar, coal, lumber or iron ore, shall be admitted free of duty for the benefit of long-established industries in one part of the country, when that raw material in abundance exists in another part of the country, and is a basis for expanding industry there? Consideration of such questions and of the fact that not infre-

quently advocates of retaliatory legislation or punitive measures against the industrial combinations are either the disguised representatives of the combinations or their unwitting tools, points directly to the ease with which self-seeking politicians, for concealment of inability to handle properly great problems and for self-preservation against a people who might begin to think, may, in the confusion and muddling of extraneous issues, give the people no chance to think, and thus may be returned to their offices and emoluments with no more power and no more purpose to meet an emergency than they have displayed during the past ten years and more, in which there have been instances of campaigns waged upon the tariff issue being followed by legislative devotion to finance, of campaigns waged upon the money issue being followed by legislative occupation in the tariff, and with the prospect of galvanized ghosts alone as issues, of committing the country to the desperate act of foreign war.

Indeed, to a man without political aspirations, and ambitious only for the peace and prosperity of his country, the remedy for possible evils, outgrowths of the era of combination and consequent change in methods and in thought, seems to lie close at hand without the necessity for one stump speech or for one pretense at law-making. It is to be had in what President Roosevelt characterized in his Fourth of July oration as "honest and fearless administration of the laws as they are on the statute-books." By that, of course, is not meant fearless and honest administration of laws that have been placed on the statute-books as a sop to Cerberus, as a deceptive response to popular agitation, and which consequently contain the reasons for their own negation whenever a serious attempt may be made to execute them, but fearless and honest administration of existing laws for the maintenance of justice and equity, and covering quite adequately the relation of an individual to his fellows or of a corporation, be it one of \$50,000 or \$2,000,000 capital, to the public.

For there may be quite as much demagoguery in administration of laws in attempting prosecution under defective statutes as in the making of such laws.

Fearless and honest administration of the law goes straight to the root of the whole matter. The more weighty the issues involved the greater the need, not for more laws creating confusion and occasions for delay in the courts, but for absolute honesty and unflinching courage in executing existing law. A thought of plain everyday law is applied, for instance, to the anthracite coal situation, with its notable publicity, at the hands of a righteous judge without fear and without reproach and of a prosecuting attorney with no political or personal debts, past, present or prospective, law recognizing no difference between a labor union and a corporation when a boycott is to be considered, law permitting to go unrebuked and unpunished no conspiracy against the public welfare, suggests a course of action that might make unnecessary, if not ridiculous, the anti-trust politics with which the country is threatened. For it would demonstrate that there is already law enough to meet every emergency.

The great danger in the promised campaign is not merely a danger to the so-called trusts. Politicians before

this, seeking by raising misleading and befogging issues to distract attention from their shortcomings and incapacities, have led the people to believe that they were in earnest, and that their words were truth. The result has been that the people have blindly and rashly taken matters into their own hands, which the agitators call, after the catastrophe they have induced, "traveling ahead of the politicians," and have sought in violent revolution to overturn and destroy inevitable law. In fanning sentiments against industrial or other combinations the politicians are playing with fire. Their straw issue may be the nucleus of a disastrous conflagration.

There is consolation, however, in the knowledge that in the present case such foolhardiness is limited to the leaders of no party. For experience is beginning to teach the people that there is danger ahead, with loss and suffering for them, when politicians of ostensibly antagonistic parties approach unanimity in pretending to deal with any great problem.

#### ANARCHY IN PENNSYLVANIA.

While the newspapers of the country are publishing details of the movements and utterances of the great generals connected with the anthracite coal strike, comparatively few persons seem to be aware of the outrages which have been perpetrated against merchants, professional men and women and children, under the guise of assisting the strike. An insight into the demoralizing and paralyzing conditions which have thus supervened is given in correspondence of the Philadelphia Evening Bulletin from Wilkes-Barre. It says:

Threats of reprisals have in recent months brought about a reign of terror. Parents of dying children have been unable to secure medicine; girls, upon their marriage eve, have found their characters blackened and their prospective husbands frightened away; clergymen have received mysterious threats as to what would happen if they dared preach their convictions; women have seen the front of their houses placarded with offensive notices and guards placed upon their verandas to frighten away visitors because their husbands felt obliged to work in order to keep starvation from their loved ones; merchants have been ordered not to supply the needs of hundreds of customers under penalty of the loss of all their trade.

The Evening Bulletin says that scores of milkmen throughout the district have had their business destroyed because they refuse to allow unions to tell them who could be served with milk, and that in some towns dozens of families were found unable to secure food from any store, although they had money with which to pay for it. One instance of aggravated persecution is given as follows:

An engineer of this city was paying for his little house upon the installment plan, when the miners' strike was declared. His three children were all sick, and to support them he remained at work. He was not a member of the union. While he was at work behind one of the stockades his youngest child developed diphtheria. A physician was called in and hastily wrote out a prescription, telling the mother that great haste was necessary. As the mother left the house she was booied by a crowd. At the village drugstore the man in charge told her that he did not dare fill the prescription for her. She started for another drugstore, but a man ran ahead of her and warned the druggist that he must not aid her, as her husband was a non-union man. She visited five stores in vain and then hurried home to beg the doctor to try and get the medicine for her. As he started out he was told that he must never enter her house again, or his business would be broken up. Before he could secure the medicine, through a third party, the child died.

To combat these outrages the Citizens' Alliance has been organized, and

has already 25,000 members scattered in different towns of the anthracite region, and about 200 prosecutions have been successfully conducted. Mr. J. Ridgway Wright, the leader of the Alliance in Wilkes-Barre, is quoted as follows:

The outrages that have been wrought near here are past belief. You could write any story that the limits of your imagination could conceive and yet fall short of the truth. Widows of men with brilliant war records have been hounded to death. Sons who have striven to support aged mothers or crippled brothers have been beaten, their houses set on fire and their friends subjected to every conceivable humiliation.

Mr. Wright suggests the possibility of the Alliance becoming a national body to put an end to the cowardly boycott and its accompanying blackmail. It looks as if something of the kind must be done to save the preponderating masses of the people of the United States from the outrages to which they are liable whenever a dispute may arise between a comparatively limited number of employers and employees. Until such an organization reaching every quarter of the United States may be effected means should be devised whereby not only the tools of the conspiracy against the public may be punished, but also the leaders, those who are really responsible for the boycott. A system of agitation that would starve widows, besmirch a girl's character and slay infants should be made an utter impossibility in America. The responsibility for it should be placed where it belongs, not with the agents, but with the originators.

#### FOREIGN TRADE IN OIL.

Referring to the need of greater transportation facilities for the rapidly-widening trade in Texas oil, so that British concerns may secure a portion of that trade, Petroleum of London finds a situation in competing companies in Texas to justify the building up of a strong oil-carrying service across the ocean. This suggestion is emphasized by the announcement that within a few weeks the Shell Trading Co. will be transporting through the Gulf and across the Atlantic at the rate of 3,000,000 or 4,000,000 barrels of oil a year, operating six tankers by September 1, with a total capacity of 400,000 barrels, and building others to meet the requirements of existing contracts.

#### The Southern Farm Magazine.

That Southern farm lands are cheap as compared with the value of Southern farm products is a fact which has already attracted Southward thousands of thrifty farmers from other parts of the country. It is recognized by Capt. J. F. Merry of Dubuque, Iowa, long interested in bringing under remunerative cultivation a greater area of land in the South. His statement published in the August number of the Southern Farm Magazine that the next great advance in the price of lands will be in the South, and the facts set forth by him to sustain it, will attract widespread attention, and will be influential in swelling the Southward tide of American migration. One of the States which already has received a portion of that migration is Tennessee, and Col. J. B. Killebrew, who has labored for many years to that end, concludes in this number his comprehensive, interesting and valuable article describing the farming potentialities of his State, while J. F. Rinker of Maryland contrasts conditions in the West and in the South in an argument of facts showing the agricultural advantages of the latter.

Another suggestive and timely article

bearing upon a question which is agitating the Southern mind is by Mr. Gerald McCarthy, biologist of the North Carolina department of agriculture, in which he makes a strong plea for useful education as opposed to much of what is called education, but which is, in reality, fancy training for uselessness. He contends that taxpaying farmers should demand that the educational fund shall be used to furnish practical and useful agricultural training to their children and the children of their laborers, instead of being wasted upon frivolities.

Dairying, the relation of insects to the propagation of disease, the value of industries to a farming community, the opportunities for individual settlers and a variety of other topics are discussed in the August issue.

The Southern Farm Magazine is published monthly by the Manufacturers' Record Publishing Co., Baltimore, Md. Price \$1 a year.

#### WEALTH IN THE SOUTH.

##### A Great Storehouse of Mineral Riches.

[The Baltimore Sun.]

Mr. Richard H. Edmonds, editor of the Manufacturers' Record, who returned home yesterday after a visit to New York and Atlantic City, stated that while in New York he heard considerable discussion among financiers regarding the estimates which Mr. Schwab, president of the United States Steel Corporation, put upon the properties of that company. By some these estimates were regarded as too high, while others took the position that as many of the properties owned by the company could not be duplicated, and must, therefore, increase in value every year, Mr. Schwab was not incorrect in his estimates.

"The valuation," said Mr. Edmonds, "of \$700,000,000 which Mr. Schwab puts on the ore properties owned by his company and of \$100,000,000 on the coal and coke properties reminds me of some statements made a year or two ago by Hon. Abram S. Hewitt at the time of the organization of the Alabama Consolidated Coal & Iron Co., when the directors of the company had before them the question of buying some coal and ore properties which had not at first been included in the combination. Mr. Hewitt took very decided ground in favor of the purchases in substance saying:

"The Almighty has made the coal and ore properties, and there is no power which can duplicate them. Man can build furnaces at any time or anywhere, but the ownership of furnaces does not count so much in the long run; but every good ore and coal property secured must steadily increase in value by virtue of the fact that the world's enormous consumption of coal and iron is inevitably enhancing the value of every good coal and iron property, whether developed or undeveloped."

"The enormous increase in the consumption of iron and coal during the last ten or fifteen years and the constant accelerating rate of consumption of iron throughout the world must necessarily bring about a fulfillment of Mr. Hewitt's prediction by very greatly enhancing the real value of all coal and iron properties. This does not mean an enhancement in the value of furnaces or rolling mills or iron works generally, because they may be badly constructed or badly located, but an enhancement in the value of the coal and ore in the ground. The rapidity with which the iron and steel business of this country is developing—and what is true of this country is true of the world, though the rate of growth elsewhere is not quite so rapid as here—is seen in the



fact that in 1860 the total output of bituminous coal in the United States was 5,700,000 tons, whereas at the present time it is 250,000,000 tons, the production in the Southern States alone being over 50,000,000 a year, or about eight times the output of the United States in 1860—Alabama having at present an output nearly double the total output of the whole country forty-two years ago, and West Virginia having an output four times as great. Our production of pig-iron is now at the rate of nearly 18,000,000 tons a year, whereas in 1860 the total output of pig-iron in the United States was 880,000 tons, or less than one-third as much as the output of the South at present. The production in the South this year will probably run nearly 3,000,000 tons, Alabama, the leading iron-producing State of the South, having an output this year of between 1,250,000 and 1,500,000 tons.

"The increasing consumption of iron and coal under the tremendous pressure of the industrial character of this age, which has made manufacturing so predominant that the output of the manufacturing and mining interests of the country is now \$15,000,000,000 a year, against a total of \$3,500,000,000 for agricultural products, may have some temporary setbacks, and there will, of course, come periods of dullness and depression, as in the past, though there are no signs of any just at present. But, regardless of times of depression, there must necessarily be a continued and enormous increase in the consumption of iron and steel, and the increase of from 3,000,000 or 4,000,000 tons of pig-iron production twenty years ago to nearly 18,000,000 tons this year, and from about 50,000,000 tons of coal twenty years ago to 250,000,000 to 300,000,000 tons this year, indicates something of the rapidity of development, which must grow, and which, as Mr. Hewitt with much greater clearness and emphasis than I have been able to quote from memory, said, 'will every year add to the value of coal and iron ore properties.'

"It would be useless to attempt any comparison of Southern iron companies and their capitalization with the figures quoted by Mr. Schwab as the basis of capitalization of the United States Steel Corporation. He reports that, in his opinion, the 87,000 acres of coal lands and the coke ovens connected therewith, owned by his company, are intrinsically worth \$100,000,000, and justify capitalization on that basis. In view of the fact that the great development of coal and iron interests in Pennsylvania has given what seems to Southern people an exorbitant value to coal lands in that State—the prices being reported at from a few hundred dollars an acre up to as much, in some cases, as \$1000 an acre—Mr. Schwab may possibly be justified in his estimate; but in West Virginia, in Tennessee and in Alabama equally as good coal lands, so far as quantity and quality of coal are concerned, can be had at \$25 to \$50 an acre. The possibility of increase in their value is readily seen. The Tennessee Coal, Iron & Railroad Co., the Sloss-Sheffield Iron & Steel Co. and the Alabama Consolidated Coal & Iron Co. each have probably very nearly, if not quite, one-half as much coal land as Mr. Schwab's company, but, of course, their properties have not reached any such stage of development, either in mining or coke-making, nor will they be able to do so for some years to come. But what the constituent companies of the United States Steel Corporation have been able to accomplish in the almost fabulous creation of wealth, brought about by their

development during the last ten years, ought to a very considerable extent be duplicated in West Virginia, Tennessee and Alabama, if not in some other States, during the next ten years.

"The fact is that the combined capitalization of all the iron companies of Alabama, owning in the aggregate, as they do, several times as much coal land as President Schwab's company and the bulk of the ore lands of the State, with twenty-five or thirty furnaces, is smaller than Mr. Schwab's estimate of the value of his company's coal lands and coke ovens alone. This simply indicates, even allowing Mr. Schwab's estimate to be somewhat optimistic, that there is a great future ahead for the South's iron and coal interests and of all Southern roads that reach the center of the South's coal and iron regions. Down South we have just begun the real work of development.

"Some time ago, in talking with one of the ablest iron and steel men of the country, who had just given some months to a study of the property of the Tennessee Coal, Iron & Railroad Co., I asked him if, after his investigation of the conditions in Alabama, in the light of his experience in Pennsylvania and in the Lake Superior districts, the claims made for Alabama were too optimistic. He said: 'No; the Creator has done everything for Alabama, and man is only beginning to utilize the advantages of that section. If some great iron and steel man like Carnegie or Frick had secured control of the Tennessee Coal & Iron Company ten or fifteen years ago, there would be no telling how many millions of dollars that company would now be worth.'

"The enormous wealth, almost fabulous, which has been created during the last twelve or fifteen years in the development of the iron and coal interests of Pennsylvania, making the section centering around Pittsburgh one of the richest districts in the world, must inevitably be duplicated in the South; probably not only in the Birmingham district, but in the section of East Tennessee and Southwest Virginia and Southeastern Kentucky, the region which is to be penetrated by the Seaboard's new line and which is now in part already reached by the Chesapeake & Ohio, the Norfolk & Western, the Southern and other roads.

"But the volume of traffic in that territory, as well as in the Alabama coal and iron regions, will, as has already proved to be the case in West Virginia, grow more rapidly than railroad facilities can be provided for handling it. Necessarily, this vast development of the South, now so actively and prosperously under way, should inure to the very great enrichment of Baltimore."

#### For a Furniture Factory.

Mr. C. P. Henderson, chairman of the manufacturers' committee of the Valdosta (Ga.) Board of Trade, writes to the Manufacturers' Record that Valdosta will offer inducements for the location there of two or three factories for making cheap furniture and chairs. The Board of Trade is anxious to get into communication with persons who desire to make furniture in a locality far removed from factories of the same kind.

#### Castor-Oil Outfit Wanted.

Mr. C. L. Farnham of San Juan, Porto Rico, writes to the Manufacturers' Record that he desires to get into correspondence with manufacturers of small outfits for making castor oil.

The mill at Kenilworth, La., which cost \$150,000, is now turning out paper of a high grade made from bagasse.

## THE HEART OF AMERICA.

A Rich Mineral and Timber Region Which Is to Be the Scene of Great Railroad Activity—The Seaboard's Extension Westward Probably to Be Followed by Other Lines.

In 1890 Mr. Edward Atkinson, in an elaborate article in the Manufacturers' Record entitled "The Future Situs of the Principal Iron Production of the World," reviewing the marvelous increase in iron and steel consumption, and pointing to the time when the productive capacity of the iron works of the United States would be pushed to their utmost to meet the increasing home and foreign demand, pointed with special emphasis to the great mountain region of Western Carolina, Southwest Virginia and Eastern Tennessee and Eastern Kentucky. Referring to this region he said:

"When this great section of heavily timbered mountain ranges and broad, high valleys, sometimes called 'The Land of the Sky,' which had been kept from view by the surrounding pall of slavery, first began to be opened, the writer ventured to describe it with the Cumberland and Piedmont plateaus on either flank and the high uplands of Georgia and Alabama on the south, as comprising 'an area nearly as large as France and twice the area of Great Britain, containing a potential in agriculture equal to either and minerals and timber equal to both combined.' It is to that section that attention will be mainly directed by this treatise. It may become the center of the principal iron production of the world. By whom and in what manner will it be developed?"

"A great many returns have been made which go far to prove that it will not long be necessary to move iron ores over long distances in this country or to import high-grade ores low in phosphorus from other sections. The evidence seems to be adequate to prove that there are vast deposits of suitable ores for every kind of steel among the crystalline rocks of the Appalachian chain. Others must verify these statements; I give in the appendix but one in connection with this treatise.

"If such are the figures, and if within the very heart of 'The Land of the Sky' these great deposits of ore and coal have been reserved for our use, then it follows that the United States must serve the world with a constantly-increasing proportion of the iron and steel which will be required.

"If it be true that there are places at which the materials can be assembled for making a ton of Bessemer metal suitable for conversion at a cost of a dollar to a dollar and a-half per ton of metal, and if these materials can be converted at such points at a total cost of little more than ten dollars per ton of metal, covering all charges for transportation of material, labor, repairs, depreciation, insurance, taxes and general expenses of administration, then at that point may be the center of the chief production of iron and steel in the near future.

"One may not venture yet to name the specific place or places. The survival of the fittest among the many enterprises now claiming public attention will soon determine it in the emulation between the North, the South and the West.

"Suffice it that if one should stand upon the top of the highest peak among the Great Smoky mountains in the heart of the Southern Appalachian chain, and could bring within his vision all that would come within a radius of seventy-five to a hundred miles, he might be able to establish the center of iron and steel production which would not be far away from what has been called the 'center of

gravity' of the population of this country.

"If he could then bring within his vision the whole configuration of the area enclosed within a circle of about one hundred and fifty miles in diameter, centering on the Great Smoky mountains, he might trace the lines made by the erosion of the rivers and the gaps in the ranges on which the rails may be laid to the northwest at the southern border of Ohio, and to the southeast on the way toward the Atlantic ports of South Carolina, over which the metal produced at the possible future center of the iron production of this country may be distributed on the easiest grades either for domestic consumption or for the supply of foreign markets."

This forecast of the iron and steel making possibilities of that region doubtless seemed to many at the time when made to be visionary, and in the last ten years there has been comparatively little evidence brought forth to indicate that the time may come when Mr. Atkinson's suggestions will be realized. Shortly after his article was written the world-revolutionizing discoveries of Bessemer ores in the Mesaba district completely changed the situation, and made it possible to center, for the time being at least, the world's greatest iron and steel interests in Pittsburgh. But the fundamental facts regarding the territory to which Mr. Atkinson referred have not been changed, and at last that region is to be fully opened up. There are many experts who claim that there is no other section of this country so richly endowed with high-grade coking coal in seams that run at times to as much as ten feet, fine Bessemer and other iron ores and timber, as is this region in which the four States of Virginia, Kentucky, Carolina and Tennessee corner. The efforts made fifteen or twenty years ago to fully develop that territory by the construction of the Charleston, Cincinnati & Chicago Railroad, afterwards known as the Ohio River & Charleston, failed, not because of any inherent weakness in the situation, but because of the failure of the financial interests identified with this project. Again and again have movements been made towards taking up that enterprise, as well as independent moves looking to the construction of other lines; but it is only now that the full fruition of the hopes of the pioneers of that district seem destined to be fully realized.

The Charleston, Cincinnati & Chicago Railroad was built in sections, and after the receivership its name was changed to the Ohio River & Charleston. That portion of the line extending from Marion, N. C., to Camden, S. C., 171 miles, was purchased by the Southern Railway, and is now known as the South Carolina & Georgia Extension Railroad of the Southern system. The Manufacturers' Record recently published a letter from Mr. Samuel Spencer stating that provision had been made in the consolidation of that line for an issue of \$4,000,000 of bonds to be utilized whenever it might be deemed necessary to build a northwestern extension to the coal fields of Virginia and Kentucky. That portion of the line from Johnson City, Tenn., to Hunt Dale, N. C., was some months ago purchased by a syndicate organized by the Union Trust Co. of Baltimore as the nucleus of an important railroad and coal development. The same syndicate purchased 118,000 acres of coal land, which will be opened up by the extension of this road. A deal has now

been negotiated by which the Union Trust Co. has effected a sale of these coal and railroad properties to interests identified with the Seaboard Air Line, and the extension of this road to Lincolnton on the south and to Tom's Creek, in Wise county, Virginia, on the north, will be actively pushed. About eighty miles of grading has already been done, and the southeastern extension from Hunt Dale will be via Morganton and the northwestern extension via Johnson City, the mountains being crossed at Moccasin Gap. These extensions will be finished, it is expected, within a year, and will give a direct outlet to tidewater at Wilmington and Southport, N. C., for the vast mineral wealth of Southwest Virginia, and at Southport, as recently stated in the Manufacturers' Record, large terminal facilities for handling coal are being constructed by the same people who are building in this connection the Cape Fear Terminal Railway, a 30-mile railroad from Wilmington to Southport. The Seaboard will thus have a direct line from Southport—one of the finest harbors on the South Atlantic coast—over its Carolina Central branch to Lincolnton, and thus on into Southwest Virginia, while it is intended that eventually this road will be extended northward through the "Breaks" of the Big Sandy river, and thence on to Ashland, Ky., and Ironton, Ohio, connecting at the latter place with the Detroit Southern road, of which Mr. Samuel Hunt is president, he also being president of the Ohio River & Charleston. Thus this line will become the connecting link through one of the greatest mineral and timber regions of America, with the Lakes on one side and the Atlantic on the other. From Lincolnton to Tom's Creek, where it is expected that the fullest development of the coal business will temporarily center, will be about 160 to 175 miles, thirty-four miles of the line being already in operation.

Furthermore, there are evidences that the Atlantic Coast Line may also have an extension into the same fuel region. The North Carolina Central Railroad is now incorporated to build a line west from Fayetteville to Concord, a distance of about 100 miles, and in the direction of the Virginia, Tennessee and Kentucky coal region. While there is nothing to show that this road has any alliance with the Atlantic Coast Line, it would be available to give the system a direct route westward if it desired such a line.

Thus this territory promises to be the scene of very great railroad activity. With the Norfolk & Western and the Louisville & Nashville already reaching a considerable portion of it, the Seaboard extending its line through it, the Southern and other roads will doubtless press forward and take an equally prominent part in the opening up of a region which can furnish sufficient traffic to tax the resources of all the roads that may get into that territory. Somewhere in that region we shall probably see the building of furnaces and steel plants and the creation of cities which may rival the progress and prosperity of Birmingham, and out of that section will be poured a vast traffic in coal and iron and ore, timber, marbles and other products.

More than fifteen years ago the Manufacturers' Record directed attention to the great value of the coal, iron and timber land in Southwestern Virginia and Eastern Kentucky. The Charleston, Cincinnati & Chicago road was then projected and the territory was considered in connection with that proposed railway construction. On July 31, 1886, in a lengthy editorial, based entirely on the report of an expert who had investigated that territory, it was said:

"The Elkhorn vein of coal of Eastern

Kentucky, and which it is believed extends into Southern West Virginia, and the character of which has only recently been developed, is claimed to be the most valuable bed of coking coal in the United States. This bed has already been proven up over an area of 700 square miles, and shows much less percentage of ash—in some cases as low as 3 per cent.—and less sulphur and other deleterious properties, and is more compact in texture and of a stronger bearing surface in the furnace than the coke of Connellsville. Proofs and developments such as these substantiate the prophecy of the late Prof. William B. Rogers of the Technological School of Boston, that in this territory will be hereafter found the seat of the great iron industry of the world. Other than the great wealth and possibilities of this region, as shown by the statements made, the canal coal of West Virginia and Kentucky is a factor of vast importance. Here as nowhere else in the world as to quantity is found this deposit, while in quality, with the exception of the very limited supply of the Bog Head coal of England—a coal so limited in supply as to be in no sense a competitor—is its equal to be found. The timber of this section of the country is superior in its character, and in West Virginia and Kentucky covers nine-tenths of the area. Here all the deciduous woods flourish in primeval growth, and in certain restricted areas are found isolated patches of the soft pine and the hemlock. Here also is the present existing area of the black walnut, which, from its exhaustion, is yearly becoming more valuable. With avenues of transportation open, immense quantities of timber, lumber, staves, hoops, oak bark, hemlock bark and other products of the forest would seek markets, and by reason of its peculiar location markets would be found in all directions for all its products."

In the latter part of 1886 a special correspondent was sent over the entire line of the projected line in company with Gen. John T. Wilder, a well-known coal and iron expert, at that time largely identified with the iron and railroad interests of the South. In a letter written from Pike county at that time this correspondent said:

"On the border line between Kentucky and Virginia is a great gorge called 'the breaks of the Cumberland.' Through this gorge flows Russell fork, a large tributary of the Big Sandy river. This break is one of the most remarkable signs of that tremendous upheaval that lifted the sandstone and coal measures from far down in the bowels of the earth and projected them above its level at an altitude and with an environment that reduce the cost of mining to a minimum. No need here to sink shafts hundreds of feet into the ground and to incur tremendous expenses for engines, pumping apparatus and hoisting machinery. In most of these vast coal measures gravity will do all the carrying from the veins where the miners work to the railroad cars. These are not small veins but a foot or two thick, but, on the contrary, there are any number that run from four to ten feet in thickness that can be opened up expeditiously and cheaply."

General Wilder sums up the situation tersely by saying:

"There is more cheap coal in Wise and Dickinson counties than the world can use for many centuries. I have never seen or read of anything like it. God Almighty set His great forces to work ages ago to create this tremendous upheaval. Volcanoes and earthquakes were the mighty agencies employed to lift these vast masses of carbon from subterranean depths and fasten them in their places

high above the valleys until they were needed. If these deposits underlie the surface for seventy miles down the Big Sandy, as they are said to do, we have, then, the most accessible and most prolific coal formation of which the world has knowledge."

After reviewing the whole territory and giving many interesting facts regarding the iron and coal development around Ashland and Ironton, Ohio, this correspondent closed one of his letters with this impressive statement: "Looking at the future business of this road from whatever standpoint, I can see nothing to prevent it from becoming the greatest freight carrier of the whole Southern country."

In 1891 was published an interview with Gen. Thomas L. Rosser, who after the war went West and eventually became the chief engineer, respectively, of the Northern Pacific and the Canadian Pacific railroads, and who thus by virtue of his work in building these lines through the great West and Northwest became thoroughly familiar with the conditions of that section. General Rosser returned to Virginia, and the promoters of the Three Cs asked his advice regarding that line, and later he became chief engineer in the location of that road. In his interview he said:

"I traveled hundreds of miles, up stream and down, over valleys and mountains, getting a general idea of the topography of the region between the breaks of Big Sandy and the point on the Tennessee river line where the road ought to be built. On this expedition I became convinced that the continent had no such aggregation of raw materials as the counties above mentioned contain. I had seen Minneapolis grow from a town of 11,000 to a city of 200,000. What did it? Railroads. What made St. Paul? Railroads. Now, if railroads could effect such results in Minnesota, where there are no minerals, what cannot railroads do for the creation of towns in an undeveloped region whose resources embrace every raw material needed for the maintenance of populations equal to those of the largest cities of the Northwest?"

Referring to the five counties of Southwest Virginia, General Rosser said:

"There is a mountain-belted circle consisting of five counties where stands, among other resources, more merchantable timber than is left in the entire States of Wisconsin and Minnesota combined, and what is more remarkable is that in this same area there are grouped more coking coal and iron ore than anywhere else in America. It is a region without a peer in wealth of timber, coal and iron ore. There are very large deposits of red and brown iron ores ranging from 45 per cent. to 54 per cent. in iron. To the south are located the famous Cranberry mines, and all the way along the line of the Three Cs Railroad through Western North Carolina and South Carolina are the world-renowned deposits of magnetic ores. Again, here are to be found those red and brown ores necessary for the mixture which produces the best results. Then, too, vast quantities of limestone for fluxing are found here. Nor is limestone the only stone found in this wonderful vicinity, for there are immense quantities of marble of the kind commonly called Tennessee marble."

"As has been stated several times in this article, there is more timber in the five counties to which I have referred than is today left standing in the two States of Wisconsin and Minnesota. As showing the attention that has already been attracted to these forests, the fact may be stated that all the black-walnut trees there have been bought up by the

Singer Sewing Machine Co. There is no question but that this section will become the greatest woodworking center in the Appalachian region. Confirmatory of this position, an extract from the tenth census report, Vol. IX, pages 5 and 12, will carry conviction to business men. In that report occur these words:

"The most valuable hardwood forests remaining on the continent exist in Southwestern Virginia and the adjacent counties of West Virginia, Tennessee, Kentucky and North Carolina."

"Hon. John R. Procter, one of the foremost authorities on resources—a man who has not only filled with great distinction for many years the position of State geologist of Kentucky, but one whose opinions carry weight in London and in other foreign capitals—has said in a written report:

"The entire range of rocks from the lowest found in America up to the carboniferous is crossed by your Charleston, Cincinnati & Chicago Railroad line between Western North Carolina and Southwest Virginia, thus giving the greatest variety of mineral, agricultural and forest products. A road running westward from New York city for 1000 miles would not cross more geological horizons than would be crossed by 100 miles of your road from Western North Carolina to the coal fields of Southwest Virginia. I wish to call your attention to and emphasize the following points:

"(1) The large area of valuable forest traversed by your line.

"(2) The belts of iron ore crossed, remarkable for quantity, quality and variety of ores.

"(3) That the nearest steel-making ores to coking coal are to be found on this line.

"(4) That your line will penetrate an area of coking coal remarkable for the extent of the coal, its thickness, the cheapness by which it can be mined, and for the excellence of the coke product.

"(5) That this is the nearest coking coal and the nearest Bessemer steel ores to the center of population of the United States and to the great markets of the Northwest."

"Just before entering the coal fields you cross the outcrop of the red fossil ore of the Clinton group. The great iron industry at Birmingham has been built up with this ore, and in Southwest Virginia this ore ranges from 45 per cent. to 54 per cent. of iron, and is most favorably located for cheap mining."

"Prof. William B. Rogers, shortly before his death, told the writer that he thought time was not far distant when the center of iron and steel manufacture in the United States would be located between Eastern Kentucky and Western North Carolina, and that a combination unequaled anywhere was there to be found.

"You cross the continuation of the Tennessee marble. I have inspected this marble where it would be crossed by your road in Southwest Virginia, and am sure that on account of its great beauty and variety it will find a market all over the United States."

"Professor Leslie, State geologist of Pennsylvania, after a personal investigation, says: 'The valley of Russell and Tazewell counties, being geologically as well as geographically the prolongation of the limestone fields of Pennsylvania, contain the same ores in the same formation and in the same conditions.'

"Gen. John T. Wilder, in a letter to the Iron Age, said: 'Somewhere between the Cranberry ore beds and these limitless coal fields will the best Bessemer iron be made as cheaply as the lowest grades of common iron can be manufactured at Bir-



mingham and Chattanooga, and here in this high and healthy section must naturally spring up the great manufacturing city of the central South, for the greater cost of carrying these steel-making ores

and this first-class coke to these distant furnaces would make a splendid profit for the works, and no iron center on the continent could compete with works so situated."

## SENATOR ELKINS ON WEST VIRGINIA.

By F. E. SAWARD.

[Written for the Manufacturers' Record.]

I met Hon. Stephen B. Elkins the other day. He is robust physically, mentally and financially, judging from his appearance, and as cheery as ever; in fact, the senior Senator of West Virginia is very much alive.

"How is West Virginia, Senator? Surely she is coming up as a coal State."

"Well," he said, "you ought to know, for you have followed it since the days of very small things. You remember how we used to chat over the possibilities of the West Virginia Central road? Well, she earned a million dollars last year, and would have done twice as much if the Pennsylvania had only given us cars. There were lots of times when we didn't have half cars enough, and therefore were restricted in our sales. West Virginia is next to Illinois in the coal-producing States, and is not very far behind that, and from the railroad development that is going on, before many years she will give Pennsylvania quite a hustle for position. There were some days last year when our line did 7000 tons, and there is coal enough along the line to do 10,000 tons a day for 100 years. England's great prosperity has been made from her coal and iron, and the greatest fortunes of her so-called 'barons' have come from these sources, and West Virginia is full of coal, oil and timber. The coal is the best property one can have; it even beats your New York real estate. Yes, I am out of the West Virginia Central now, for we sold that to people who are going to extend it to the Little Kanawha, and some day that is going to be connected with the Wabash. There is quite a gap to be filled between the line at Cumberland and the Western Maryland Railroad, but the boys that have it in hand now won't take very long to make that connection, and in the meantime both of these lines are paying for themselves, so that they are not 'out and injured,' and have a big future before them. They won't be like we were, bottled up at Cumberland, with only half cars enough to do the business.

"Yes, I am still buying coal lands, for as I have said before, that is the best property one can have, and some day there will be built the line known as the Coal & Iron Railroad, that will help to deliver the product of West Virginia at tidewater. There is going to be plenty of work for all the railroads that will be built, and there will be a profit to them, because the demand for coal is going to be great enough to avoid the necessity of any cut rates for carrying it. Oh, no, I don't fear the B. & O., the C. & O. or the N. & W., for they have got all they can do, and they will have plenty to do to take care of the tonnage that will come from the development along their lines. I tell you West Virginia is a great State, and you ought to come down again soon and see us. See how we have grown since the last time you were down there.

"One thing about labor in this State is that it is generally contented, and that helps a great deal, for it may be said that the miners of West Virginia are generally a well-paid class, and the efforts of the agitators who came there from other States after the Fourth of July trying to

get the miners to turn out in sympathy with something or somebody did not make much of a success of it, for everybody knows there was no stoppage at all along the West Virginia Central, and nothing of any account along the B. & O., while along the N. & W. they pretty soon went to work again, after having been out for a short rest, and no one could tell them what they went out for. The men who worked in the mines along that line are paid by the car; there is no screen used against them, and they can turn out on an average six cars a day, and can make very good wages by working steadily. They in that field get seventy-five cents for room cars and ninety cents for entry, and none of the cars would hold over three tons. Coal is very soft in that field, making it easy work to get out from six to eight cars a day. This coal is loaded into the big steel cars, which carry about fifty tons each, and a record for the month of June is 7028 cars to tide-water shippers alone, and it looks as if the month of July would exceed that tonnage. In addition to their own cars, the carrying company has been getting a lot from some of the Western lines. It is a fact that after about ten days from the first stoppage every mine in that district was in operation to its full capacity.

"Along the C. & O. there was considerable idle time on account of the fact that the U. M. W. is very strong in that particular district, but the trouble there is over, and the mines are in operation again on the operators' terms, and while the tonnage for the month of July may not be as large as the same month last year, yet it will not pull down the total for the current fiscal year very much. When we get the report for the year ending June 30, this year, it will show a very large increase over the preceding year, which was in excess of any other year in the history of the company. There is a lot of development work going on along Cabin creek, which is going to add very largely to the tonnage in the ensuing year. It is said that before sixty days are over there will be nineteen large modern collieries in operation in this particular district alone. According to the report of the chief mine inspector of West Virginia, the production of coal last year was 23,816,434 tons, and when the great operations of the United States Steel Corporation and others down in the Pocahontas district are fully under way it will not be surprising to find a tonnage of 35,000,000 to 40,000,000 tons as the yearly product. Some of the largest of the Pennsylvania operators of both the hard and soft coal districts are putting their money down in that part of the country because they know what the future of it is likely to be. By the way, it will not be surprising some day to find that the Southern Railway is pulling out a lot of coal from the Virginias.

"During all the time of the so-called 'strike' there was a very large tonnage indeed loaded at Baltimore, and there never was a day but what some coal was loaded at Norfolk, even if not the usual quantity, and any contracts that the shippers had with the United States government for supply coal to the Navy in any part of the world will be fully taken

care of, in spite of the reports to the contrary. Sailing vessels and barges which have been in the anthracite trade were turned over to the soft-coal loading ports, and in this way a very much increased tonnage was done, and anyone acquainted with the facts knows that there was a lot of coal that went to New England to take the place of hard coal, which was not to be had at any price.

"A great deal of credit is due, regarding the action taken at Indianapolis, to the delegations from Kentucky and Alabama. Those of the former State had made an agreement with the operators for another year, and they went into the convention with the determination to uphold that agreement at any cost, and it is not surprising, therefore, that the best of feeling exists between employer and employed in Kentucky, and that the coal production is increasing, especially in the western district, all of which will be of benefit to the railroads traversing that State. The Alabama delegates had much to do along the same line, for they have just completed an agreement for another year, and that agreement being based on the price of pig-iron, it is gratifying to learn that contracts have already been made for the next year's delivery at an advance over the price fixed for the current year. In this way the wisdom of the delegates of Alabama is going to bring good results to the men they represent. Evidently there are good times ahead for the South, and the mere statement that the Baltimore & Ohio Railroad Co. has awarded contracts for 40,000 tons of steel rails for next year's delivery is an index of the prosperity that is going to come to the Mountain State."

Evidently the Senator from West Virginia is very proud of the State which he has the honor to represent.

### SPOT PIG-IRON SCARCE.

#### Healthy Condition of Plants in the Birmingham District.

[Special Cor. Manufacturers' Record.] Birmingham, Ala., July 28.

The searcher for spot pig-iron in this portion of the field will have to wear out a good lot of shoe leather before he finds any great amount of it, and what he does discover will come very high, something like \$20 per ton. The smaller makers will not sell ahead to any extent, and as a rule have a little product that they can unload at the high prices now prevailing. Mr. J. W. McQueen, secretary of the Sloss-Sheffield Steel & Iron Co., makes the prediction that by the first of January it will be impossible to buy a ton of spot iron in the Birmingham territory for less than \$25. The larger producers have been and will continue to take care of local consumers.

As showing what the conditions are, it is noted that the United States Cast Iron Pipe Co. at Bessemer had to take 2500 tons of gray forge last week for use at its plant. The grades used as a common thing are Nos. 2 and 3. This gray forge was brought from Sheffield here with freight charges, another incident indicating that things are close in this district.

The furnaces of the Sloss-Sheffield Steel & Iron Co. are being brought up to a high state of productiveness. From capacities of 150 and 175 tons they have been increased to 200 and 225 tons. Both the city furnaces and one at North Birmingham are in service, also one at Florence and two at Sheffield. No. 2 city furnace was blown in last week, and is now turning out a little more than 200 tons a day. No. 3 at North Birmingham, which was banked a few days ago because of the temporary suspension of work by the miners, has been blown out and will be relined and prepared to make over 200 tons a day. In May the Sloss Company made

only 300 tons less than the Tennessee Company, and in June 325 tons less.

Most of the product of the larger companies has been sold for this year. The Tennessee Company will sell only for delivery during March, April, May and June—no earlier, no later. It is learned at the office of this company that the agreed price is being adhered to, and that spot is practically out of the question. Mr. F. A. Burr, the new sales agent, was down from New York today looking over the field. He had not been here before, and was simply getting acquainted. He is well pleased with the outlook, and sees the future with bright prospects.

The Republic Iron & Steel Co. is out of the market for iron, its own mills taking all that can be made. The rolling mills of the company have had all labor questions settled, and things are now moving with ease, with a heavy demand that takes the output as soon as made. While nothing has been heard for some time about the steel mill to be built by the Republic Company, it is regarded as pretty certain that such a plant will be constructed before another year.

The Woodward Company is making about 350 tons a day with both furnaces. The management will not sell over two months ahead, and is, as a consequence, able at times to get a little better prices than some of the others. It is understood that the proposition to build a new furnace there has been put off for a while because of the high price of material. It is practically impossible to secure machinery, it is said.

It is a matter of surprise that the Alabama Steel & Wire Co. has not yet decided upon a location for its two furnaces and steel plant. The writer saw President Schuler, and he told him he intended to build, but that it was practically impossible to secure a location. He said a land tract of at least 1200 acres was desired in order that houses might be built on it for the men. As it is now at the Ensley plant, the men have to pay high rents and cannot afford to buy and build. This keeps the workmen shifting all the time. It is a hard matter to keep men where they cannot own their own homes. It is the impression of many and one gathered by the correspondent of the Manufacturers' Record that Mr. Schuler favored the neighborhood of Bessemer. He said, in talking of that place, that it had every advantage of any other place, and some others of its own. But as soon as it was reported that there was a possibility of the plants going there lands were put to prices that were practically prohibitive.

The supplies of coal, limestone and ore are reported generous. There is not much coke, however, and it may be that it will grow less in the next few days. The Trussville furnace of Buck & Lacy has just started, and four of the stacks at Ensley are going.

Good demand at high prices is the report for the Ensley steel mill. The two Ironaton furnaces of the Alabama Consolidated Coal & Iron Co. are also working steady now. The demand for the famous Clifton iron of this company is growing all the time, and it is impossible to keep it in stock. The Gadsden furnace of the same company is also in operation, while work on the new stack which is to be built is being pushed to the utmost.

Practically all the miners have gone back to work, though some 500 are still out at various points. These do not affect the furnaces, as none are with the big companies.

Stocks of coal companies of the district have risen \$3 to \$4 a share since the miners' troubles were settled.

Tests of oil for fuel for warships are to be made at the Washington navy-yard.

## AMERICAN IRON TRADE.

### Review of the Industry's Developments Last Year.

In the forthcoming volume, "Mineral Resources of the United States, 1901," now in press, United States Geological Survey, Mr. James M. Swank discusses the statistics of the American iron trade for 1901. Mr. Swank states that the era of unexampled prosperity in the industries of this country, which may be said to have been ushered in at the beginning of 1899, when an active demand for iron and steel was developed, accompanied by a rising price, has continued from that day to this, and at no time has been more fruitful of good results than at the time of his writing, May, 1902. The use of iron and steel in almost every form increases at a greater ratio than the increase in our population, and the use of steel for high buildings, for the manufacture of steel cars and for the construction of steel vessels is sure to call for an increasingly large tonnage from year to year. It may not be generally known that our steam and trolley railroads consume in rails, cars, locomotives, bridges, buildings and electrical machinery fully one-third of all the iron and steel that we annually make.

The leading statistical results of the year 1901 concerning the iron and steel industries of the United States and the related industries are given below, compared with the statistics of the same industries for 1900—the first year of the twentieth century compared with the last year of the nineteenth century.

In 1901 the United States produced 15,878,354 long tons of pig-iron, 8,713,302 long tons of Bessemer steel ingots, 4,656,309 long tons of open-hearth steel and 13,473,595 long tons of steel of all kinds, and rolled in all 12,349,327 long tons of finished iron and steel, including rails. The comparative figures for 1900 are: Pig-iron, 13,789,242 long tons; Bessemer steel ingots, 6,684,770 long tons; open-hearth steel, 3,398,135 long tons; steel of all kinds, 10,188,329 long tons; rolled iron and steel, including rails, 9,487,443 long tons. In 1901 there were mined 28,887,479 long tons of iron ore, and there were shipped 20,589,237 long tons of Lake Superior iron ore, 12,609,949 short tons of Connellsville coke and 1,279,972 short tons of Pocahontas coke. For 1900 the comparative figures are: Total production of iron ore, 27,553,161 long tons; shipments of Lake Superior ore, 19,059,393 long tons; shipments of coke—Connellsville, 10,166,234 short tons; Pocahontas, 1,341,444 short tons.

It will be observed that in 1901 the total production of iron ore increased 1,334,318 long tons; the shipments of Lake Superior ore increased 1,529,844 long tons, and the shipments of Connellsville coke increased 2,443,715 short tons; that the production of all kinds of pig-iron increased 2,089,112 long tons; the production of Bessemer steel increased 2,028,532 long tons; open-hearth steel, 1,258,174 long tons; all kinds of steel, 3,285,266 long tons; structural shapes, 197,989 long tons, to a total of 1,013,150 long tons; plates and sheets, 459,897 long tons, to a total of 2,254,425 long tons; Bessemer steel rails, 487,162 long tons, to a total of 2,870,816 tons; iron and steel wire rods, 519,643 long tons, to a total of 1,365,934 long tons, and all kinds of rolled iron and steel, 2,861,884 long tons. There was a small decrease in 1901 in the production of iron and steel cut nails, but an increase of 2,569,843 kegs in the production of iron and steel wire nails. The increase in the production of tinplates and terneplates amounted to 96,626 long tons. The increase in the mileage of new rail-

roads 5368 miles, as compared with 4157 miles of new railroads built in 1900.

The total value at the mines of the iron ore produced in 1901 was \$49,256,245, or an average value of \$1.71 per long ton, as compared with a value for 1900 of \$66,590,504, or an average value of \$2.42 per long ton. The average price in 1901 of gray forge pig-iron at Pittsburg was \$14.20 per long ton, as compared with \$16.90 in 1900; of Bessemer pig-iron \$15.93 per ton in 1901, as against \$19.49 in 1900; of steel rails at mills in Pennsylvania \$27.33 per ton in 1901, as against \$32.29 in 1900.

Our total imports of iron and steel, including machinery, cutlery, firearms, etc., for which weights are not obtainable, amounted in foreign value to \$20,394,995 in the calendar year 1901, as against \$20,443,911 in 1900 and \$15,800,579 in 1899, a decrease in 1901 as compared with 1900 of \$48,916.

The total exports of iron and steel, which include locomotives, car wheels, machinery, castings, hardware, saws, tools, sewing machines, stoves, printing presses, boilers, etc., amounted in the calendar year 1901 to \$102,534,575, as against \$129,663,480 in 1900, \$105,690,047 in 1899, \$82,771,550 in 1898, and \$62,737,250 in 1897. Our exports of iron and steel more than doubled in value from 1897 to 1900, but there was a shrinkage in 1901, as compared with 1900, of \$27,008,905, or over 20 per cent. During the early part of the calendar year 1901 our exports of iron and steel were well maintained, but there has since been a great decrease in our exports, caused entirely by the decline in prices abroad and by the revival of an active demand at home.

Our exports of agricultural implements, which are not included in the iron and steel exports already given, amounted in the calendar year 1901 to \$16,714,308, against \$15,979,909 in 1900, \$13,594,524 in 1899, \$9,073,384 in 1898, and \$5,302,807 in 1897. These exports increased in value threefold in the five years from 1897 to 1901, inclusive.

In the fiscal year ended on June 30, 1900, there were built in the United States ninety steel vessels, with a gross tonnage of 196,851 tons, and in the fiscal year of 1901 there were built 119 steel vessels and one iron vessel, with a gross tonnage of 262,699 tons. In the first nine months of the fiscal year 1902, ended on March 31, there were built eighty-four steel vessels, with a gross tonnage of 151,340 tons. Vessels for the United States Navy are not included in the figures here given.

Of the total world's production of iron ore in 1900, the United States produced over 30 per cent.; of coal, over 31 per cent.; of pig-iron, over 34 per cent.; of steel, over 37 per cent. It is almost unnecessary to add that the United States produced in 1901 a much larger percentage of the world's production of iron ore, coal, pig-iron and steel than it did in 1900, its production of iron ore in 1901 having increased 1,334,318 long tons; its production of pig-iron, 2,089,112 long tons; its production of steel, 3,285,266 long tons, and its production of coal, as at present ascertained, 20,559,518 long tons.

### Activity in Iron and Steel.

The Iron Age of this week says:

"The very substantial basis on which the iron trade rests is shown by the heavy transactions in pig-iron for delivery next year. The buying movement is general, all markets reporting an active demand, which comes from all classes of consumers. The disposition to provide for requirements so far in the future is largely prompted by the present scarcity of iron and the belief that no great improvement

will be experienced for some considerable time. The coal miners' strikes in Pennsylvania and the Virginias drag along, with little prospect of an early settlement, and the supply of pig-iron is thus still curtailed for lack of fuel. Consumers who must have iron are compelled to pay such premiums for early delivery that the prices named for next year are attractive, even though much higher than those paid on contracts running through this year. The Republic Iron & Steel Co. were the largest buyers of Bessemer, placing several contracts for 1903 delivery, including one of 30,000 tons. They are reported to have bought in all about 100,000 tons. The scarcity of foundry pig-iron continues to disturb Eastern foundrymen, who are obliged to depend more and more on imported iron.

"The situation as to steel billets grows easier, the pressure for prompt deliveries having diminished. Domestic makers are of the opinion that they will hereafter be in a position to take care of the trade.

"The rail mills are getting well supplied with work for next year. Orders booked are now estimated at 1,200,000 tons, which, with probably 400,000 tons carried over from this year, will give them 1,600,000 tons, while they have five months more to take additional business before the year opens.

"The bridge builders are getting so loaded with work for next year that they are discriminating on fresh business, giving preference to regular customers and standard construction. Deliveries of structural material are improving as the mills are increasing their output.

"The capacity of tinplate factories appears to be in excess of midsummer requirements, some rather large establishments having shut down to await the disposal of an accumulation of product.

"Fair orders for scrap are going abroad, which would be much larger if foreign sources of supply were equal to the demand. Low phosphorus scrap is especially desired.

"Spelter maintains its strength, spot metal being very scarce."

### In the Beaumont Oil Field.

[Special Cor. Manufacturers' Record.]  
Beaumont, Texas, July 28.

Since my last report there have been two highly important developments in the oil circles, satisfactory at least to the majority of the oil producers, brokers and users. The first was the wonderful yet terrible-looking Jennings fire. The fire burned for six days, and the hopes of the Louisianians were at a low ebb when Jack Innis from this city went over, organized his forces, placed seven boilers in position and put the fire out by the use of fire. He blew it away in a few seconds by the use of a big flow of steam directed at the mouth of the well.

The other important matter has been the action of Judge Bryant at Sherman in the Snow case. The attorneys for Annie E. Snow were seeking to have the powers of Receiver Taliaferro made absolute, they claiming that the companies which were getting oil from the Hill were not keeping their books honestly, and that they could be handled in a cheaper and more expeditious manner through the receiver. The case lasted two days, and was finally postponed until September 8, though not until Judge Bryant had announced from the bench that he had made up his mind to refuse the application, and that the receivership would be limited, as it has been for several months past. The judge also stated from the bench that he would certainly not allow anyone to use his court as a tool to effect compromises, and he was vehement when he made the statement. The case resulted practically in a victory for the Guffeys, Gladys City, National Oil & Pipe Line Co., and, in fact, all companies on the Veatch survey which have not already compromised with the Snow attorneys.

The shipments of oil from the field this month will not run up to as high a point

as they did last month by 2000 or 3000 cars. There were 8400 cars shipped last month, and this month they will do well to get 6000 cars.

The oil developments are proceeding rapidly and satisfactorily at both Saratoga, in Hardin county, and Sour Lake, in Jefferson county.

### Oil for Atlantic Liners.

The International Navigation Co., owner of the American and Red Star liners, has begun to experiment with the use of fuel oil. It is installing in the big liner Kensington oil-burning furnaces, and a great saving is expected.

It is announced that the Florida East Coast Railroad will use crude oil as fuel for its locomotives instead of coal. Experiments made by the line have convinced it that oil is cheaper than coal, both in the freight and passenger service, and has other advantages.

### Cloth from Pineapple Leaves.

George B. Munsing, who has a pinery near Tampa, Fla., is perfecting plans, according to the Tribune, for the establishment in that city of a plant to degum and refine the fiber of pineapple leaves to be used in the manufacture of cloth resembling silk. The fiber will be extracted from the plants in the fields and shipped to Tampa for treatment. Mr. Munsing calculates that the value of the product will be equal to that of the pineapple.

### A Philadelphia Branch Established.

Messrs I. B. Williams & Sons of Dover, N. H., well-known manufacturers of belting, rawhide and leather, are opening up a Philadelphia branch in charge of Messrs. Harry S. Huhn and William J. M. Weaver, 722 Arch street.

This department will handle, in addition to belting and lace leather, a full line of power-transmission machinery, mill, mine, railroad and engineers' supplies.

The company desires the catalogues of manufacturers making these products and wanting Philadelphia representatives.

The Mississippi River Transportation Co., recently organized at New Orleans, will operate a barge line on the Mississippi river to handle principally cottonseed products. Four model barges towed by a steamer will make the trip up the river and back to New Orleans twice a month, and it is expected that they will bring to New Orleans from 80,000 to 100,000 sacks of cottonseed products each month.

The Mississippi river commission, having charge of improvements of the river from the mouth of the Ohio to the head of the passes, reports that since 1879 the total amount appropriated for that purpose has been \$43,572,693. During the last year the United States has built 331,679 cubic yards of levees, and individual States 1,473,882 cubic yards.

It is announced the William R. Trigg Company of Richmond, Va., has been awarded the contract to build for the New York, Philadelphia & Norfolk Railroad Co. an ocean-going steel tug 122 feet long, 25 feet beam and 12 feet 3 inches draft, with engines of 650 horse-power.

The sales in the Joplin (Mo.) district during the week ended July 26 were 8,679,600 pounds of zinc ore and 1,416,860 pounds of lead ore, valued in all at \$184,937.

The International Acetylene Association will hold its next regular meeting at Chicago August 11, 12 and 13.



## RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

## CENTRAL OF ALABAMA.

**President John Carlisle Describes the Line and Its Territory.**

Mr. John Carlisle, president of the Central Railway of Alabama, writing to the Manufacturers' Record from Cincinnati, Ohio, says:

"The meeting of the stockholders of the Central Railway of Alabama, lately held at Chattanooga, Tenn., was for the purpose of electing directors for this year and to pass resolutions authorizing the issuing of bonds bearing 5 per cent. interest to the value of \$25,000 per mile, and directing the directors to ask for proposals for the purchase of the bonds or a loan of sufficient funds for construction with the bonds as security, or for a contract of underwriting. It is proposed to build a first-class railway, capable of carrying the heaviest engines with normal loads. It is probable that the shops and roundhouse will be located at New Decatur, Ala."

Continuing, Mr. Carlisle also writes:

"The line will be 125 miles long. It has been planned and undertaken by a railway company incorporated and organized under the laws of the State of Alabama, and will extend southward from New Decatur, in Morgan county, through Morgan, Lawrence, Winston, Walker and Tuscaloosa counties to the city of Tuscaloosa, traversing a territory hitherto not served by railroads.

"The country which this line crosses is about equally divided into stretches of fairly level, somewhat rough and rough country, but is at all points accessible for teams to a distance of at least ten miles on either side. It requires no tunneling, and but one large bridge, and can be graded at an average cost of \$8000 per mile. It admits of good gradient and curvature.

"This road will run through an exceedingly rich timber country for almost its entire length, there being upward of 2,000,000,000 feet of pine and the hardwoods within ordinary hauling distance of the line it follows. The prevailing hardwoods are white and red oak, poplar, ash, hickory and gum. From Tuscaloosa north some sixty miles is the largest and finest body of long-leaf pine in the State of Alabama.

"From Decatur southward some twenty-five miles this road will traverse an excellent agricultural country, producing at present 50,000 bales of lint cotton and 25,000 tons of cottonseed annually, and requiring 12,000 tons of fertilizer. From the very considerable amount of business done at and through Danville, the town center of the region, it is evident that the country yields quite a quantity of general agricultural products, cattle, sheep and hogs, and that there is correspondingly a large traffic of miscellaneous merchandise.

"This whole region constitutes the northwestern portion of the Warrior coal field. There are two seams—a 36-inch vein, known as the Black Creek vein, and rated as the fancy coal of Alabama, and underlying this is the Big Seam, which at Horse Creek is now being worked in a vein varying from seven to eleven feet in thickness.

"Along some thirty miles of this line is an abundance of brown hematite ore. Water is everywhere abundant, and in some places the very finest of water-power is available."

Decatur, the northern terminus, a city of 10,000 population, is on the Tennessee

river. It has several large lumber concerns, and also establishments consuming considerable quantities of coal. It is on the Louisville & Nashville Railroad and the Memphis & Charleston division of the Southern Railway. Jasper is a town of 2500 population, with several important industries, notably coke production. At this point are the Northern Alabama division of the Southern Railway, and the Kansas City, Memphis & Birmingham Railroad. Tuscaloosa, the southern terminus, is a city of 5000 population, situated on the Black Warrior river, which is navigable to Mobile. At this point are the Mobile & Ohio Railroad and the Alabama Great Southern Railway.

## SHORT ROUTE FROM MEXICO.

**The Mexican Central Surveying a Line Towards the Rio Grande.**

Mr. H. R. Nickerson, vice-president and general manager of the Mexican Central Railway, writes to the Manufacturers' Record from the City of Mexico confirming the report that the company is making a survey in the direction of Texas. It was reported some time ago that the Mexican Central would build into Texas and connect with the St. Louis & San Francisco Railroad at or near San Antonio. Mr. Nickerson says:

"The Mexican Central Company is actively constructing a line from San Pedro, the present end of its San Pedro branch, to Paredon, where it will connect with the Monterey division, a distance of 221 kilometers, or 137 miles.

"The company is also constructing a line from Lecheria, just north of the City of Mexico, on their main line, to Tampico. The distance, however, is yet indefinite, owing to the fact that the surveys are not yet completed.

"The company has also a corps of engineers engaged in making a survey from Paredon, above mentioned, on the Monterey division, to the Rio Grande crossing, but at what point this survey will terminate we are yet unable to say, owing to the incomplete condition of the work. The survey has been completed, however, from Paredon to Lampazos."

Lampazos is in the northern part of the State of Nuevo Leon, about seventy miles from the Rio Grande. The construction of the line from Lecheria to Tampico and from Paredon to the Rio Grande would give the Mexican Central a short route from the City of Mexico to the United States.

## EASTERN OF ALABAMA.

**A Mineral Railway Backed by the Louisville & Nashville.**

The Donelson Construction Co., of which J. E. Donelson is president and J. H. Johnston, secretary and treasurer, is the contractor for the Eastern Railway of Alabama. Writing from the headquarters of the company at Birmingham, Ala., to the Manufacturers' Record, Mr. Johnston says:

"The Eastern Railway of Alabama is being built for the purpose of reaching pyrites mines in Clay county, Alabama. The first twenty miles have been let, and we are moving an outfit to Talladega to commence immediate construction on this line. The immediate purpose of this road is to develop this pyrites property, but the ultimate intention is to construct it to Ashland, the county-seat of Clay county, which is one of the richest counties in mineral in the State.

"The first ten miles of this road, for which we have the contract, is through a very rugged country, and follows Talladega creek, where it breaks through Talladega mountain. The country is

well watered, and abounds in mineral springs of varied properties.

"While the Eastern Railway of Alabama is a separate and distinct corporation, the money for the construction of it is being advanced by the Louisville & Nashville Railroad Co., and Mr. R. Montfort, chief engineer of the Louisville & Nashville Railroad, is the chief engineer of the Eastern Railway of Alabama, and will have supervision of the construction."

## GULF &amp; SHIP ISLAND.

**Construction of Sidings and Passing Tracks—Shops Completed.**

Mr. Willis W. Vail, chief engineer of the Gulf & Ship Island Railroad Co., writing from Gulfport, Miss., to the Manufacturers' Record, says:

"The Gulf & Ship Island Railroad will build probably twenty miles of siding for passing tracks, as spurs to various industrial establishments along the line of the road, etc., as fast as the rail can be taken out of the main line, which latter is being laid with 75-pound rail, A. S. C. E. section. Other work to be done in the near future is to put in a small yard near Hattiesburg, Miss., with six-stall roundhouse, water tank, coaling platform, ash pit, machine shop, etc. Work in progress at present is ballasting the whole line with gravel, widening cuts to twenty-three feet and fills to eighteen feet, laying 75-pound rail as above noted, dredging a ship channel seven miles long, 300 feet wide and nineteen feet deep, also an anchorage basin 3000 feet long and 1400 feet wide and nineteen feet deep, building a pier a mile long with 2600 feet of open wharf thirty feet wide.

"New car and paint shops have just been completed. The building of 500 flat and box cars will be commenced soon. There is no other work definitely projected for the near future."

## Winnsboro to Rock City.

Mr. J. E. McDonald, one of the incorporators of the Winnsboro & Rock City Electric Railway Co., writes to the Manufacturers' Record from Winnsboro, S. C., saying that the promoters of the road believe it will be a paying line, and would promote the business interests of the town. Continuing, Mr. McDonald says:

"The line would not exceed in length six miles, and the grading would be light. The Rock City terminus would be at the quarry of the Winnsboro Granite Co., which controls the finest granite anywhere in the Southern States. This company now employs over 300 hands, and the employees prefer to have their homes in town to the country in which this quarry is located. The capital stock of the proposed corporation is \$50,000. In connection with the electric railway we propose to erect some hotels and boarding-houses for the accommodation of the employees of this granite quarry. Besides this, the country traversed between here and Rock City is rather thickly populated, and a very good freight and passenger traffic could be expected. We propose to build a first-class electric railway, and if the enterprise is successful we may extend the line to Columbia, which could be reached in about thirty miles from Winnsboro."

## Beginning of a Lumber Road.

Mr. B. Miller, president of the L'Angeuille Lumber Co., writes to the Manufacturers' Record from Marianna, Ark., giving the following information about the L'Angeuille River Railway Co.:

"This is a switch or spur track from the St. Louis, Iron Mountain & Southern Railroad to ours and the Indiana & Arkansas Lumber & Manufacturing Co.'s plants, covering for the present, with switches, about two miles of track, which

will be operated jointly by the company organized for that purpose, which may lead to the building of a timber road in the direction of Memphis, where both companies have timber interests. Both of these are large plants, and are located in a densely timbered and cotton country, where there are some splendid opportunities for stave, heading and hoop factories or for handle factories. There is also plenty of timber for spokes, hubs, rims, etc. The land is rich and well adapted for agriculture after the timber is removed. Marianna is one of the best towns in Arkansas, surrounded by good farming country, and there is plenty of room for enterprising people with or without capital."

## Seaboard and Frisco.

Advices from St. Louis report that a conference has been held in that city between B. L. Winchell, vice-president and general manager of the St. Louis & San Francisco Railroad, and J. M. Barr, vice-president and general manager of the Seaboard Air Line, regarding the joint use by the two systems of the Birmingham Belt Railroad, which was recently purchased by the Frisco.

The St. Louis & San Francisco Railroad has for some time been operating trains to Birmingham, Ala., and has long desired an eastern outlet. As soon as the Seaboard completes the improvement and extension of the East & West Railroad, which it recently bought, the two systems will connect at Birmingham, and the Frisco will be in a position to obtain a direct eastern outlet via Atlanta.

The St. Louis Republic says: "The two big systems are sure to agree upon a traffic alliance in connection with a joint use of the Frisco's Birmingham Belt, and before many months it is expected that Frisco trains will run through to the Atlantic coast."

## Steel Cities Railway.

Mr. J. P. Hornaday, banker and broker of Cincinnati, Ohio, writes from Birmingham, Ala., to the Manufacturers' Record as follows:

"I have contracted with the Birmingham & Steel Cities Railway & Power Co. to finance their road and take exclusive charge of their proposition. Responsible financial people have agreed to take bonds of road. Construction will commence at once—that is, within thirty days. The road is forty miles of standard construction, and will extend from the government building in Birmingham to Ensley, Wyandham, Dolomite, Woodward, Pratt City, Adamsville and Brookside. Our company has sixteen squares of franchises in this city and franchises in the several cities through which we operate. The road is to cost about \$800,000. A strong local crowd is interested. Cleveland, Cincinnati and Boston people take the bonds. I shall remain here and complete all details."

## A Maryland Electric Road.

The Kent & Cecil Light, Power & Railway Co. of Maryland has organized by electing officers as follows: President, Edwin R. Cochran, Jr., Wilmington, Del.; vice-president and secretary, Wilmer Emory, Baltimore; treasurer, Henry M. McCullough, Elkton, Md.; counsel—Cecil county, Henry M. McCullough; Kent county, John D. Urie.

The company is seeking franchises over the public roads in Kent and Cecil counties for the purpose of building an electric railway to Tolchester and Rock Hall, on the Chesapeake bay, to Chestertown, the seat of Kent county, and thence to Elkton, the seat of Cecil county, and thence to the Delaware State line, where it will

eventually connect with a line to be constructed southward from Wilmington. Construction is expected to begin in about a month between Chestertown and the bay.

#### To Valuable Coal and Lumber.

Mr. G. B. Nicholson, chief engineer of the Cincinnati, New Orleans & Texas Pacific Railway Co., writes to the Manufacturers' Record from Cincinnati, Ohio, regarding the reported railroad from Pine Knot, Ky., to Johnson Island. He says:

"I suppose the report refers to a road about four miles long being constructed from near Pine Knot, on the Cincinnati, New Orleans & Texas Pacific Railway, to coal mines on the south fork of Cumberland river. It is being built by the Stearns Salt & Lumber Co. J. S. Stearns is president, Ludington, Mich. Contract has been let for the work to the Southern Construction Co. The coal territory which will be developed by the road is extensive and valuable. In addition, there is much fine oak timber."

#### Railroad Reports.

The report of the Southern Railway for the fiscal year ended June 30 shows gross earnings \$37,712,248; expenses and taxes, \$26,846,837; net earnings, \$10,865,411. The increase in gross earnings was \$2,014,476; in expenses and taxes, \$1,753,423; in net earnings, \$261,053. The report for the month of June shows gross earnings \$3,016,116, increase \$317,490; expenses and taxes \$2,227,390, increase \$113,738; net earnings \$788,726, increase \$203,752.

The Georgia Southern & Florida reports for the year ended June 30 gross earnings \$1,250,875; expenses and taxes, \$855,906; net earnings, \$394,969. For the month of June gross earnings \$105,468; expenses and taxes, \$84,798; net earnings, \$20,670.

#### A Kentucky Coal Line.

Concerning the Cumberland Railroad, Mr. C. W. Stone writes to the Manufacturers' Record from Warren, Pa. He says:

"The Cumberland Railroad Co. is an auxiliary proposition to the Cumberland Coal Co., which has acquired a considerable amount of coal land in the southern part of Knox county, Kentucky, which they expect to open up in the near future, and the incorporation of the railroad is for the purpose of affording means of transportation from the mines that they expect to open. Neither enterprise has yet reached a stage beyond the formative period, although it is expected that both will assume working shape in the near future."

#### Southern Railway Dining Cars.

The management of the Southern Railway has decided to equip the dining cars owned and operated by the system with electric lights and electric fans. This work is to begin at once. Some of the cars are now in the shops, and it is expected that they will be turned out for use at an early date, but the work will continue until all such cars are thus equipped. The superior standard of the Southern Railway dining-car service will in this way be still further advanced. It is the intention of the management not to permit the service to be excelled by the dining-car service of any other system.

#### Lehigh Traction.

Mr. Lewis Bendit, president of the Laufketter-Bendit Mercantile Engineering Co., writes from St. Louis to the Manufacturers' Record, saying:

"The Choctaw Construction Co. has been organized to build the power-house,

railway, etc., for the Lehigh Traction Co., Lehigh, I. T., and we have been retained as consulting engineers on this work. We are proceeding at once to prepare the plans and specifications. We shall shortly be in the market for about twenty miles of rails and power-house equipment, etc."

#### To Reach Mexican Mines.

According to dispatches from Chihuahua, Mexico, the rails have arrived for the extension of the Parral & Durango Railroad, and tracklaying is to begin soon. It is said that the road will tap some of the richest mining camps in the States of Chihuahua and Durango, and enable many low-grade ore producers to reach a market. The extension of the road will, it is further reported, touch Guadalupe y Calvo, in the State of Chihuahua.

#### Railroad Notes.

The station Cains, S. C., on the Southern Railway, has had its name changed to Towney.

President W. E. Mingen has also been elected treasurer of the Virginia-Carolina Railroad Co.

The Hillman Land & Iron Co. writes from Grand Rivers, Ky., to the Manufacturers' Record that it has contemplated building a railroad to its ore mines, but as yet no work has commenced.

Mr. F. H. Britton, president of the St. Louis Southwestern Railway Co. of Texas, writes from St. Louis to the Manufacturers' Record confirming the report that the company has made arrangements to relay the line between Fort Worth and Carrollton, Texas, with 70-pound rail in place of 56-pound rail.

Mr. E. R. Nickerson, vice-president and general manager of the Mexican Central Railway Co., writes to the Manufacturers' Record saying that the company has not made any arrangements to build a branch forty miles long from the Monterey division to Ocampo, and that so far as he knows the matter has not even been considered.

The daily cut of lumber by mills located on the harbor of Duluth, Minn., is now 2,000,000 feet. Just at present, on account of a fight between the shippers and buyers on one side and the vessel owners and manufacturers on the other, shipments to the East are not half the cut. Docks are piling up with sawn lumber, most of it already sold to wholesalers, and there is now estimated to be on docks at Duluth waiting forwarding more than 150,000,000 feet of boards and strips. Of this immense quantity, nearly all goes east by water to New York and New England points. Aside from the cut of Duluth, mills located in other parts of this district that ship this way are making every day about 500,000 feet. Still other mills in the district, but whose market is elsewhere, are cutting about 1,000,000 feet daily.

The large planing mill erected at Saratoga, Miss., by the Saratoga Lumber Co. was placed in operation on the 24th inst. The plant is equipped with the best machinery built by the Berlin Machine Works, Beloit, Wis. The officers of the company are Capt. George S. Lacey, president; Mr. W. S. Welch, vice-president, and Mr. N. E. Heinrich, secretary.

Boland & Gschwind of New Orleans will manufacture, according to the New Orleans States, a new round cotton-baling press under a patent recently secured.

The first bale of this season's cotton received at Savannah sold last week for eleven cents a pound, and was immediately shipped for Liverpool.

## LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

### LUMBER MARKET REVIEWS.

#### Baltimore.

Office Manufacturers' Record,  
Baltimore, Md., July 30.

The volume of business in the local lumber market continues moderate, and a steady demand prevails for nearly all commercial woods offered. As usual at this period of the season, the movement is not expected to show much expansion, but the outlook for business during the fall months is encouraging. The building demand for lumber and other wood products will likely be increased during August, as numerous contracts for buildings, warehouses and other improvements are being closed. In North Carolina pine the market is about steady, with a more liberal supply, and the demand not excessive. There is a good foreign inquiry, and European buyers meet the views of our manufacturers now readily. There is some inquiry for cypress, but the market in this wood is quiet, with values about the same as last reported. White pine continues firm, with a moderate demand for most grades. There is a good supply of poplar on the market, and in the various grades there is an easier tendency in values. Foreign advices report the market well supplied with poplar, and values easy. In hardwoods the tone is quiet, with the movement steady and prices showing no change from the steady position last reported. The foreign export trade is slowly improving, with local exporters and foreign buyers nearer together in their views as to prices. The London Timber Trades Journal of the 19th inst. has the following in relation to the tone of trade: "Trade continues steady, and without any special feature. The import as yet is considerably behind that of last year, due largely to the backwardness of the season, but the prospect of a moderate supply is a very fair one. The present inactivity in the f. o. b. market cannot last, and already there are indications that warrant us in expecting a more lively state of trade for the remainder of the summer. Building operations, which suffered from the wet weather during the greater part of June, have been very active during the recent brilliant summer weather, and have helped the consumption."

#### Charleston.

[From our own Correspondent.]  
Charleston, S. C., July 28.

The market for lumber and other wood products during the month of July has been fairly active, both at this and adjacent ports, while in the interior the movement among saw-mills and logging camps has shown greater and more decided development. The hardwood mills are unusually busy, and in small wood-working concerns throughout the State considerable enterprise is shown in the establishment of factories. The primary industry in yellow pine continues to show favorable features, and in cypress lumber as well the outlook is favorable for a steady business during the fall months. So far during the commercial year the shipments from this port show a marked increase over last year. The foreign shipments from September 1, 1901, to July 25, 1902, aggregate 2,484,000 feet, and coastwise shipments 70,849,706 feet, or a total of 73,333,606 feet, against 888,000 feet foreign and 44,974,577 feet, or a total of 45,862,577 feet, last year. During the past week the following shipments of lumber were reported: Schooner Samuel Dillaway with 500,000 feet,

schooner Gracie D. Buchanan with 600,000 feet, steamer Arapahoe with 25,836 feet and Comanche with 65,947 feet, all for New York. At Georgetown the prominent companies are well supplied with orders for yellow pine and cypress lumber, and mills are generally working on full time. Shipments for July have been quite liberal. The Emerson Lumber Co. of Georgetown was chartered last week, with a capital stock of \$10,000. O. E. Emerson, P. Mathews and A. Jewett were the incorporators of the company. Among the shipments of lumber from Charleston last week was a cargo by the steamship S. T. Morgan for Philadelphia, consisting of 1,332,000 feet.

#### Savannah.

[From our own Correspondent.]  
Savannah, Ga., July 28.

As usual at this period of the season, the market for lumber and timber is generally quiet, with the volume of trade somewhat reduced. There is, however, a moderate demand for lumber here, and a number of inquiries coming in daily, showing every indication of a better business later on. Shipments of lumber continue, and during the past week several large cargoes went out to Northern ports. Manufacturers are generally firm as to prices, and it is expected that at the next meeting of the Georgia Saw-Mill Association the general price-list will undergo a revision. At most saw-mill sections of this State the mills are running, and have a fair supply of orders, but recent shipments from this port have reduced the supply. At Brunswick the situation is now very encouraging, and there is at present remarkable activity along the wharves and docks. At one time last week thirty vessels were in port loading with cypress and yellow-pine lumber and railroad ties, all for coastwise shipment. The cross-tie industry is at present in a very healthy condition. The five-masted schooner Governor Ames cleared about a week ago with a cargo of 39,563 cross-ties, amounting to 1,740,772 superficial feet. The offering of desirable vessels is moderate, and rates on lumber are steady. Among the charters reported last week were the schooner James Pierce, 1520 tons, from Brunswick to New York with ties at 15 cents; schooner Mary E. H. G. Dow, 1208 tons, from Fernandina to New York with ties at 16 cents, and a bark, 495 tons, from Savannah to New York with lumber at \$5.25.

#### Pensacola.

[From our own Correspondent.]  
Pensacola, Fla., July 28.

The month about to close has been a record-breaker in the export of timber and lumber from Pensacola. The collector of customs shows that for the first three weeks in the present month there has been 35,000,000 feet of lumber and timber shipped, not counting that which has gone out to coastwise American ports. It is estimated that 40,000,000 feet of timber and lumber will be shipped during the present month. Shipping interests here have been greatly stimulated by the activity of the Alger-Sullivan Company at Century, and by the location here of the Sutherland-Jones and other prominent firms. Sawn timber in this market has not undergone any change during the past week. Late arrivals of timber at Ferry Pass have been offered on the market at 16½ to 17 cents per cubic foot, with no sales reported at these figures. The situation at the moment in the timber market is considered satisfactory, with prospects encouraging for a good business during the fall months. There is also considerable doing at the shipyards. Pete, the big lighter recently built for Captain Saun-



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ders at the Langford shipyards, was launched on the 24th inst. The ways upon which she rested had been repaired, and the vessel glided easily into the bay. A tug went out and brought her to Palafax wharf. This lighter is the largest on the Gulf coast, and will hold 5,000,000 superficial feet of lumber. The next work to be completed at the Langford shipyard will be the big three-masted schooner to be built for F. F. Bingham. Receipts of timber continue light, although light rains have prevailed in the interior, and about 1500 pieces have been floated. The lumber market is fairly active, and mills are all employed on orders. There is a good inquiry from European ports, and also some South American and Cuban demand. The freight market is quiet, with a light offering of desirable tonnage. Charters reported for the week were the British ship Harvest Queen, 1894 tons, from Ship Island to Buenos Ayres with timber on private terms; schooner Charles L. Davenport, 929 tons, from the Gulf to New York with lumber at \$7; schooner W. J. Lermond, 798 tons, from Pensacola to Paysandu with lumber on private terms, and Norwegian bark Sigurd, 1490 tons, from Pensacola to Buenos Ayres with lumber on private terms.

#### Beaumont.

[From our own Correspondent.]  
Beaumont, Texas, July 28.

It would be saying too much to assert that conditions are as good now as they were two months since. Lumber is hardly up to what it was in the way of prices, and it is a fact that lumber men in this section are unwilling to expect a clearance of the trouble before fall. They assign as the cause that the drouth which has been but recently broken held on too long, and that the various fall products alone have been benefited by the recent downpours which have visited Texas and as far north as Kansas. The demand is almost up to what it was when the prospects were brightest, some three months since, but it is not up to it, and that is all that can be said. The Bartholomew mill here is running full time now. The Kirby mills are running twenty hours every day, the two shifts working ten hours each. The output from this city is consequently between 6,000,000 and 7,000,000 feet per month, with about 4,000,000 of that consumed in Beaumont. The call for ties and timbers is about the same as usual. It is the yard and planer stocks that are not doing so well. Ties are going just as they have for more than a year, and with the prospective new building of railways in Texas there will be plenty doing for timbers and ties alike. The lumber men throughout this part of the State are now simply waiting for the summer to pass, and will then look for better times.

#### Mobile.

[From our own Correspondent.]  
Mobile, Ala., July 28.

The movement in timber and lumber in the Mobile district has been moderately active during the present month, and at its close the market for sawn timber is firm, with a hardening tendency. Sawn timber when placed upon the market will bring 16½ to 17 cents per cubic foot, with sales last week of 250 pieces, 30 cubic foot average, at the latter figure. Under present conditions no great activity can prevail; shippers and manufacturers are apart in their views, the latter holding stocks at outside figures. Stocks of hewn timber are very light, and prices are steady at 16 to 16½ cents per cubic foot. There is a good demand for hewn oak at 18 to 20 cents per cubic foot, and poplar at 14 to 15 cents per cubic foot. Cypress logs are quoted 7 to 12 cents per

cubic foot, poplar logs \$8 to \$12 per 1000 feet, oak \$8 to \$12, cottonwood \$4.50 to \$5, and Tupelo gum \$4.50 to \$5 per 1000 feet. The lumber trade is in fair shape, with a good inquiry from the Continent, while the demand from South America is at the moment very light. Saw logs are coming in more freely, and mills have a better supply. Sales of logs reported last week were at \$8.75 to \$9 per 1000 feet. The shipments last week were by the steamer Fulham for Sunderland with 38,484 cubic feet of sawn timber, for the Tyne with 74,000 feet and 27,000 feet of lumber; steamer Ventmoor for Rotterdam with 118,611 cubic feet of sawn timber, 23,116 cubic feet of hewn timber and 753,897 feet of lumber; bark Alice for Port Elizabeth, South Africa, with 43,908 cubic feet of sawn timber and 162,708 feet of lumber, and bark Gierami T. for Palermo with 49,947 feet of sawn timber, and about 300,000 feet of lumber for Cuba and Mexico. At adjacent points in Mississippi the movement in lumber is strong, and mills well supplied with orders. The showing made by Pascagoula, Miss., for the fiscal year ending June 30, 1902, is a most creditable one. The total lumber and timber manufactured at the port of Pascagoula and furnished for foreign export was 122,822,192 feet, valued at \$1,561,689; total exported to domestic ports 55,038,000, valued at \$648,102, making a grand total of 177,860,192 feet, valued at \$2,209,791; miscellaneous lots of lumber, piles, ties, etc., 5,000,000 feet, valued at \$150,000.

#### North Carolina Pine Interests Consolidated.

Negotiations which have been on foot for some time between the prominent Baltimore lumber firm of R. T. Waters & Son and the Surry Lumber Co. of Dendron, Va., looking to a consolidation of the two corporations, were concluded this week. The business of R. T. Waters & Son was founded in 1865 by Mr. R. T. Waters, the firm name being afterwards changed to Johnson & Waters, and in 1874 to R. T. Waters & Son. The founder of the firm, Mr. R. T. Waters, deceased, with his son, General Waters, organized in 1886 the Surry Lumber Co., Mr. R. T. Waters becoming president, and Governor Smith its vice-president. This union of interests involves, it is said, from \$1,500,000 to \$2,000,000, and from the harmonious conduct of the business of the two corporations in the past, the merger just negotiated is one of the most important in the North Carolina pine lumber industry. The Surry Lumber Co. will now sell its output direct to the trade, and the corporation under the consolidation will increase the output of its mills at Dendron. It has also taken over for a long term of years the Norfolk planing-mill plant of the Tunis Lumber Co., and has contracted for the entire output of the plant of that company at Norfolk, taking over the present stock of 5,000,000 feet or more of lumber. There is to be no increase in the capital stock of the Surry Lumber Co., the purchase price for the properties acquired being taken out of the surplus.

#### Lumber Notes.

The Goodlander-Robertson Lumber Co. of Nashville, Tenn., desires to increase its capital stock from \$10,000 to \$25,000.

The Unaka Lumber Co. of Johnson City, Tenn., has filed an amendment to its charter, increasing its capital stock from \$10,000 to \$12,500.

The plant of the Owensboro Planing Mill Co. of Owensboro, Ky., was destroyed by fire last week, with a loss of \$20,000. The plant was partially insured.

The Kiota Lumber Co. of Kildare, Cass county, Texas, has been chartered, with a capital stock of \$10,000. The incorporators are E. S. Hooper, J. K. Heath and J. P. Rand.

It is stated that the Savannah planing mills of the Southern Pine Co. of Georgia passed from that company last week into the hands of John J. McDonough, the consideration being \$26,500.

The Emerson Lumber Co. of Georgetown county, South Carolina, has been chartered, with a capital stock of \$10,000. The incorporators are O. E. Emerson, P. Matthews and A. Jewett.

The Houston Lumber & Manufacturing Co. of Houston Heights, Texas, has been chartered by J. R. Bondurant, H. B. Williams and E. P. Hudson. The capital stock of the company is \$10,000.

It is stated that Mr. John Newman and associates of Louisville, Ky., are to erect a barrel factory at Bardstown. The factory will be erected near the depot, and will give employment to about seventy-five hands.

The Enterprise Lumber Co. of Mobile, Ala., has been incorporated, with a capital stock of \$3000. The incorporators are F. F. Grotz, H. C. Beaven, W. H. Tones and Hubbard Park. The company will build a mill in Mobile.

The large hand-saw mill of J. O. Kirkpatrick & Son of Nashville, Tenn., is to be removed to a point on Tugala river on the lands of the Gennett-Ransom Company. The company expects to invest \$75,000, and calculates on cutting 26,000,000 feet of poplar.

It is stated that the Diamond Lumber Co. of Bixley, Miss., is now engaged in building a railroad, and will have two miles of the road in operation by August 1. The road will traverse a very valuable body of virgin timber, some of which has not even been turpented.

The El Dorado Lumber Co., with headquarters at El Dorado, Ark., has been chartered, with a capital stock of \$10,000. The company will do a general wholesale and retail lumber business. The incorporators are C. P. McHenry, G. A. Rowland and J. H. Walsh.

The Hackley-Bonnett Lumber Co. of Grand Rapids, Mich., will establish a plant at Markle, Woodruff county, Arkansas. The company has applied for a charter and also filed a certificate of an increase of the capital stock of the whole company from \$25,000 to \$100,000.

Messrs. Luppert and Carman, capitalists, of Williamsport, Pa., are making extensive preparations to put in operation two large lumber plants one mile above Butler, Tenn., on the Watauga river. When in full operation they will be among the largest concerns of the kind in that section.

The Mason Lumber Co. of Seminary, Miss., previously reported with a capital stock of \$30,000, is completing plant, consisting of saw-mill, dry-kiln, planing mill, etc., with a capacity of 45,000 feet per ten hours. About \$25,000 will be expended. J. W. Post is secretary of the company.

The Finkbine Lumber Co. of Des Moines, Iowa, which has recently purchased the Niles City Lumber Co., is erecting a large saw-mill at Wiggins, Miss. When completed it will have a capacity of 125,000 feet of lumber per day, and will be among the best equipped on the Gulf & Ship Island Railroad.

The Southern Pine Lumber Co. of Texarkana, Texas, has been chartered, with a capital stock of \$300,000. The incorporators are T. L. L. Temple, George Webber of Texarkana, Ark.; C. M. McWil-

liams of Texarkana, Texas; Watson Walker, Charles Frederick and William Ashford of Diboil, Angelina county, Texas.

Messrs. C. H. Rexford of Gleton and William A. Rexford of Bristol, Va., have purchased 20,000 acres of fine timber land in Swayne county, Western North Carolina. The tract purchased is said to be among the finest timber sites in the State. The purchasers are among the leading timber men in the State of Pennsylvania.

The McDonald Lumber Co. at Paradise, Alachua county, Florida, has been chartered, with a capital stock of \$24,000. The company will buy and sell rough and dressed lumber, etc. The officers of the company are A. W. McDonald, president; J. B. McDonald, vice-president and treasurer, and L. B. McDonald, secretary.

The Columbia Lumber & Manufacturing Co. of Columbia, S. C., has been chartered, with a capital stock of \$65,000. The company will handle builders' supplies and lumber, operate saw-mills, etc. The officers of the company are W. A. Heath, president; W. M. Otis, vice-president and manager, and J. C. Otis, secretary and treasurer.

The Arkansas Lumber Co., located at Warren, Ark., has opened an office in St. Louis, Mo. The plant of the company at Warren has a capacity of 110,000 to 115,000 feet. The company owns over 60,000 acres of timber lands in the Ouachita valley region, and operates the Warren & Ouachita Valley Railroad, with twenty miles of standard-gauge track.

The month about closing is said to have been a record-breaker in the export of timber and lumber from Pensacola, Fla. Compilation of figures from the custom-house show that for the first three weeks in the month there has been shipped 35,000,000 feet of timber and lumber, not counting that which has gone to coast-wise American ports. It is estimated that over 40,000,000 feet will be shipped in July.

A giant white-oak tree was uprooted on the 22d inst. on the land of H. W. McCoy in Pole Cat Hollow, near Sistersville, W. Va. The big tree will be converted into rig sills and engine blocks. It is probably the largest tree in Tyler county, and measured six feet three inches across the stump, with a 61-foot trunk, without limb or knothole. One main sill made from it will be thirty feet long and square 30-28 inches.

The Krauser Wagon Co. of Oil City, Pa., which recently purchased a large tract of timber and mineral lands in upper Hamilton and Bledsoe counties, Tennessee, is now making preparations to develop them. The company will take steps at once to erect a spoke factory near the central portion of the tract for the purpose of supplying spokes for its factory in Oil City. It is also the purpose of the company to locate two saw-mills on the tract, one of which has already been purchased and installed.

Secretary Frank H. Lewis of the Pascagoula Commercial Club makes the following showing of the commerce in wood products of the port of Pascagoula, Miss., for the fiscal year ending June 30, 1902: Foreign exports, lumber and timber manufactured at that port, 122,822,192 superficial feet, valued at \$1,561,689; domestic exports 55,038,000 superficial feet, valued at \$648,102, making a total of 177,860,192 superficial feet, valued at \$2,209,791; miscellaneous lots of lumber, ties, etc., valued at \$624,500, or a grand total in value \$2,834,291; increase over fiscal year 1901 in lumber and timber 16,275,656 feet, valued at \$194,791.

## MECHANICAL.

### Universal Friction Swivel Machinists' Vise.

The "Jacobson" universal friction swivel vise, as shown by Figs. 1 and 2, may be used in three general positions—upright and on either side.

To accomplish this the vise is provided with a post, which is bolted to the bench; the body of the vise is mounted upon this in the upright position or on either side, and is free to turn around an entire circle about the post in any of these positions.

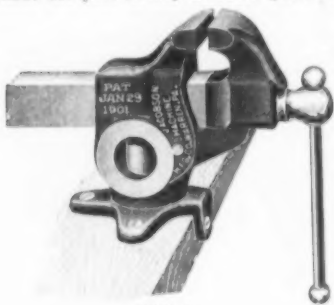


FIG. 1.

Enclosed in the body of the vise there is a lock, which is operated by the action of the screw, so that when the jaws begin to tighten upon the piece the lock is clamped onto the post and the vise held firmly in whatever position it may be when the screw is tightened. Thus it is seen that the vise may be held at any point in the circle in any one of the three general positions.

The grip of the lock on the post is said to be so firm that it will hold solidly against chipping which is hard enough to knock the piece out of the jaws.

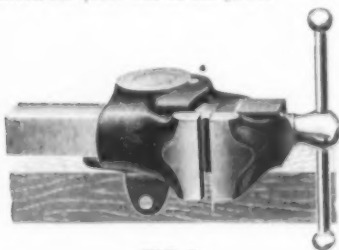


FIG. 2.

This vise is especially adapted for tool-room work, or any bench work that requires accuracy or change of position. It is also valuable for use in connection with the drill press, where, by means of a special post, it may be used to drill work at any angle—practically in any position desired.

By being able to change the position of the vise instantly, thus having the work at all times in the best position and in the best light, the workman will not only do more work, but will also do it better.

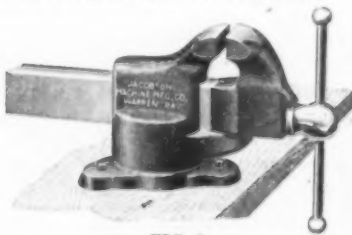


FIG. 3.

The time saved in changing this vise, together with the time saved on the work itself, it is said, will soon pay for the entire cost of the vise. It is very carefully designed, and is said to be as heavy and strong as any vise on the market.

Fig. 3 illustrates the friction swivel-bottom vise, which also has this special locking feature. This model, however, works only in the upright position, and does not turn on the sides. It is intended for all ordinary vise work. It is heavier in construction than the "Universal" type,

and is intended especially for the larger sizes.

These special vises are manufactured exclusively by the Jacobson Machine Manufacturing Co., Warren, Pa.

### Manly's Band Cutter.

The prevailing custom of opening bales of merchandise or cotton bound with iron or steel wire has been by the use of a tinners' snips or hatchet, the operation being attended by much inconvenience, labor and loss of time.

"Manly's" band cutter was designed to do this work quickly and easily; it works admirably. Cotton compressors and warehouses generally will find this tool valuable.

The cutting disc and shear jaw are made of the highest grade of selected tool steel, tempered to an extreme hardness to withstand the wear of months of constant usage without being renewed. The straight shear, as will be seen from the illustration, is set into the point of the tool, and is easily detachable, as is also the disc. The value of a rotary disc will be readily noted, because in operation it revolves, thus bringing a new cutting surface continually to the work. Each tool is supplied with an extra rotary and shear cutter. The handles are made of spe-



MANLY'S BAND CUTTER.

cially drop-forged steel, and are practically indestructible. The ends are fitted with hardwood handles, oil finished. A most important feature of this cutter is the notch at the base of the shear jaw, which serves to prevent the band from slipping beyond that point and curling up.

Little force is required to sever the band neatly and quickly.

Manly's band cutter is manufactured only by E. C. Atkins & Co., Inc., saw and tool manufacturers, Indianapolis, Ind.

### Oilstones.

The first point to be considered in the selection of an oilstone is the purpose for which it is required. Many mechanics make the common mistake of expecting one oilstone to answer all purposes. It would be just as reasonable for a carpenter to use a coarse-tooth saw on fine cabinet work as to expect a coarse-grained fast-cutting oilstone to impart a fine razor edge.

The kind of an edge imparted by a stone depends upon the size of its grains of grit, or crystals. In a coarse-grit stone these grains are large and cut deep, far-apart furrows in the tool, leaving a coarse, rough edge.

A good mechanic should have at least two oilstones, one for grinding down dull tools or imparting a coarse edge, and another for finishing. There are some stones of medium grit which answer well for many purposes, but they cannot cut as

rapidly as the coarse stone, nor impart so smooth an edge as the fine.

The hardness of an oilstone is also an

important factor in determining its cutting qualities. For sharpening ordinary

present time are the Arkansas, Washita, India and Hindostan.

The Washita and Arkansas stones are

quarried in the State of Arkansas, U. S. A., near the celebrated Hot Springs, and are found in two grades, known as hard and soft.

Hard Arkansas is composed of nearly 90½ per cent. pure silica (one of the hardest, sharpest known cutting minerals), and is about sixteen times harder than ordinary marble. Steel will not scratch it, but it will cut the hardest steel. It is said to be the finest gritted oilstone known; hence imparts the smoothest edge.

The subject of oilstones is an important one. Care should be taken in making the selections. For people not experts on the subject, therefore not capable of judging intelligently which stone to use for which purpose, it is well to buy from firms of known responsibility, whose word as to the proper stone for a particular purpose may be relied upon.

There are a number of companies manufacturing oilstones exclusively whose products are reliable.

One company dealing extensively in the



A WASHITA STONE QUARRY NEAR HOT SPRINGS, ARK., OWNED BY THE PIKE MANUFACTURING CO.

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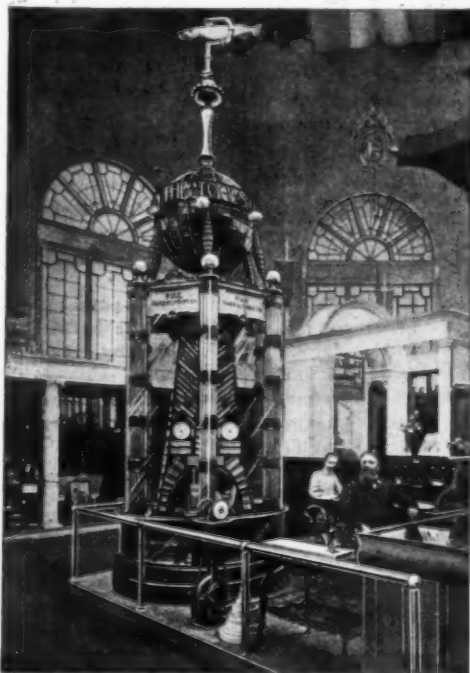
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One company dealing extensively in the

tools with broad blades or edges, a medium soft, fast-wearing stone should be



THE PIKE MANUFACTURING CO.'S EXHIBIT OF SHARPENING STONES AT THE PAN-AMERICAN EXHIBITION, BUFFALO, N. Y., 1901.

chosen. For sharpening narrow chisels, Arkansas stones is the Pike Manufacturing Co., Pike Station, N. H., which are, however, it is necessary to use a very hard said to be of the most excellent quality,



The illustrations printed here show the quarries near Hot Springs from which the stones are taken in their crude state, and an exhibit of the finished product at the Pan-American Exposition, Buffalo.

### The Absorbent Roller.

Criticism of the wheeled conveyor centers upon the rapid wearing of its supporting rollers and journals. Carriers and conveyors of this class are in wide and extended use, but their introduction has been hampered by knowledge of the serious and expensive delays resulting from the short life of the carrying rollers.

Assuming correctness of theory and design of the machine as a whole, it is perfection of details that makes it a suc-

cess, and defects in details which pre-determine failure.

roller, and combines with this an automatic and convenient means of renewing the supply of oil.

Fig. 1 illustrates this roller. Oil is fed to it from an overhanging reservoir, the feed being governed by small cocks. Fig. 2 shows a method of supplying the oil on

made to determine the best oil for use on the absorbent rollers. Heavy black oil is unsuitable. Best results are obtained with an oil of moderate viscosity and high lubricating quality, which the company supplies under its own brand as a guarantee. This superior patented device is made

type, to give more or less taper as desired. It has a new system of weighted pressure, feed rolls being all weighted from below and inside of the frame. Adjustable spring lever guides are provided on each side to hold stock to guides. It has a surface and side chip-breaker and pressure-bars, provided with ample expansion to permit deep grooving. Both cylinders and matcher spindles are double-belted. The chief value of this machine is its ready adaptability to a wide range of work.

### A New Propeller.

Mr. Sylvanus C. Littlefield, Brunswick, Ga., has invented and patented a propeller which he hopes and believes will revolutionize modern methods for obtaining high speed on steam vessels.

This propeller has a radical change in its design from the ordinary propeller now in use. The largest part of the blade is that nearest the shaft.

The result of this is said to be a reduction of suction or drag, and to throw all strain near the shaft and reduce lateral vibration. It does not tend to settle the vessel deep in the water at speed, but rather to lift it up and rush it forward, by reason of the fact that the propeller does not require complete submersion.

The sum of \$20,000 has been expended in very thorough tests for all conditions and covering all sizes of vessels.

When the Cramps were told of this invention they are reported as having said that if this were true it would be worth millions to the inventor. At that time, during the Spanish-American War, the Cramps were so rushed with work that they could do nothing with the device. The Morse Iron Works & Dry-Dock Co., New York, has contracted with the inventor for the right to manufacture the invention exclusively in the United States.

Arrangements are now pending for its production in England.

### Metal and Wire Goods.

It is always a pleasure to deal with people who are uniformly courteous, who have their patrons' interests at heart at all times, and with whose names fair dealing is invariably associated. To people buying sheet metal and wire goods, R. C. Jenkinson & Co., 289-297 Washington street, Newark, N. J., will commend themselves for these very good reasons, as well as for prompt attention to any business sent them. While not manufacturing any particular line, rather supplying other firms and manufacturers who assemble and finish, R. C. Jenkinson & Co. make quickly and to order anything of an especial nature wanted, such as sample-case trimmings, razor-strop trimmings, trunk and bag hardware,



FIG. 1—FRONT VIEW OF ROLLER.

horizontal runs of conveyor. The bar or oil rod is run downward from the oil tank, which is hinged at one end and so guided at the other that it bears on the exposed surfaces. The oil, supplied in a small and continuous flow from the oil tank, is wiped off by contact with the packing, and a continuous feed through the me-

and sold exclusively by the Link-Belt Engineering Co., Nicetown, Philadelphia.

### A New Extra Heavy Timber Sizer.

In the accompanying illustration is shown a new eight-roll four-sided timber sizer adapted to the greatest variety of work, from planing and matching boards

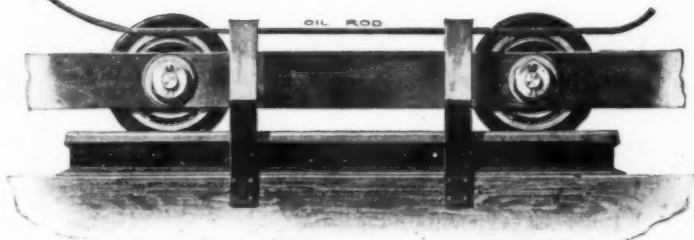
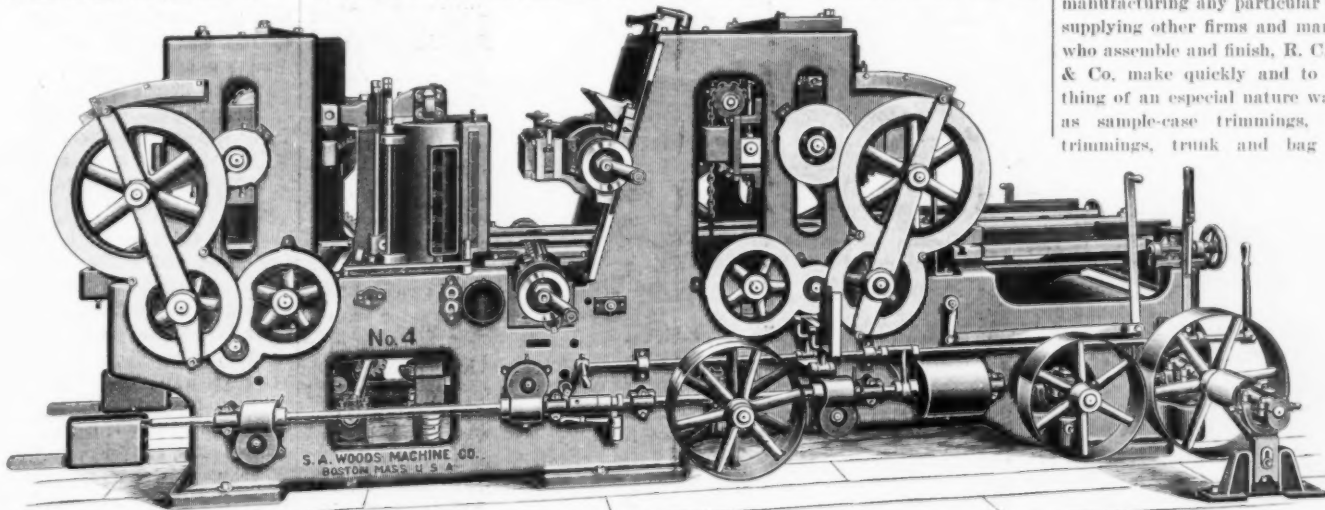
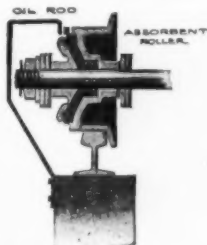


FIG. 2—METHOD OF SUPPLYING OIL ON HORIZONTAL RUNS OF CONVEYOR.



NEW EIGHT-ROLL FOUR-SIDED TIMBER SIZER.

intervals without the interposition of the packing. The "Link-Belt" absorbent roller embodies in a novel manner the advantages secured by both these efforts. It is provided with fibrous packing, securing the full advantage of capillary attraction in conveying oil to the journal of the

value for maintaining lubrication in thousands of cases, where intermittent oiling, too often neglected, may cause not only destruction of bearing surfaces, but even the greater losses from fire, so frequently caused by dry bearings.

Exhaustive experiments have been

many new devices for saving labor and time. It is made by the S. A. Woods Machine Co., South Boston, and embodies all the patents described in a recent issue in the description of the new double sur-facer, also made by this firm. In addition to these, the center guide is of expansion

buckles, sheet metal and wire goods of all kinds. Very rapid shipments and the promptness of attention to all orders have always been characteristics of the Jenkinson Company, and ones which will certainly appeal to most manufacturers wanting these goods.

## TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

### Easley Cotton Mills.

On July 10 the Manufacturers' Record announced that the Easley Cotton Mills of Easley, S. C., had about completed arrangements for a 15,000-spindle addition, with looms, etc. To be exact, there will be 16,000 spindles and 380 looms, the latter manufactured by the Draper Company of Hopedale, Mass. The construction of the necessary additional buildings has been begun, and the work is now progressing steadily by day labor. J. E. Sirrine of Greenville, S. C., is the architect in charge. All the required machinery has been purchased. About \$200,000 will be, as previously stated, the additional investment. The company has 11,648 ring spindles and 320 looms in its present mill. It uses steam-power.

### To Gin Sea Island Cotton.

The Valdosta Ginning Co. of Valdosta, Ga., will be incorporated and operate a plant of thirty-two gins for ginning Sea Island cotton, daily capacity to be fifty bales. Contract for construction of the plant has been let to Knight & Redding of Valdosta, and all the machinery required has been purchased. The building and equipment will cost \$20,000. This company is a branch of the Interstate Ginning Co., of which Chas. G. Bell of Savannah is president and treasurer; J. E. Cheesman of New York, vice-president, and Howard Harris of Valdosta, general manager.

### A \$350,000 Finishing Plant.

Announcement is made that the Appalachian Finishing Works of Asheville, N. C., is undergoing formation and will apply for incorporation, with capital stock placed at \$350,000. The company's purposes are to finish, dye and weave corduroy cloth. Messrs. Wm. Whittam, Jr., W. T. Weaver and Dr. Burroughs of Asheville, N. C., and two New York capitalists are interested.

### Textile Notes.

It is proposed to form company at Ringgold, Ga., to build a cotton mill. W. H. Odell, mayor, can probably give information.

It is proposed to form a \$40,000 company to install textile machinery in an abandoned cotton-mill structure. J. I. Westervelt, president of Brandon Mills, is interested.

It is rumored that W. H. Thomas of Georgia is investigating water-power property on Duck river near Tullahoma, Tenn., with a view to building a cotton-yarn factory at the site.

It is rumored that the Merrimack Manufacturing Co. of Huntsville, Ala., will at once arrange to double the capacity of its mill of 25,000 spindles and 848 looms, and will afterward establish a bleachery. G. T. Marsh is local superintendent.

Southern Delinting Co. of Rockingham, N. C., has been incorporated, with capital stock of \$50,000, by H. L. Ledbetter and associates. Its purposes are to delint cotton, manufacture cottonseed oil and fertilizers, spin yarns, weave cotton cloth, etc.

Board of Trade at Athens, Ga., is corresponding with a prominent New York knit-goods manufacturer, who contemplates establishing a plant in the South. The plant in view is a \$300,000 enterprise, and will be intended for producing fleeced-lined underwear.

St. Louis (Mo.) capitalists have made a proposition for the establishment of a \$25,000 knitting mill at Dallas, Ga. They state they will furnish \$15,000 of the capital required if local investors take the \$10,000. Messrs. T. M. Sanders and J. B. Watson are soliciting subscriptions.

Messrs. Lowrey, Son & Co. of Kernersville, N. C., have purchased about all the machinery needed for their knitting mill reported last week. They have secured building and will install about twenty knitting machines for the production of 200 dozen pairs of half-hose per day. From thirty to forty persons will be employed.

Elizabeth City Hosiery Co., reported last week as incorporated, has organized with D. B. Bradford, president, and P. H. Williams, secretary-manager, and directors Messrs. Bradford and Williams, C. H. Robinson, E. F. Aydtlett, G. M. Scott, Dr. McMullan and W. T. Old. The company acquires and will continue the Elizabeth City Knitting Mills, a plant of ninety-three machines, steam-power, dyeing equipment, etc. Capital stock is \$10,000.

It is proposed to incorporate the Union Milling & Manufacturing Co., with capital stock of \$1,000,000, to establish mill for weaving cotton cloth and manufacturing trousers, overalls, etc., from said cloth. Several cities are under consideration as the location for the plant, El Paso, Texas, being one of them. The Chamber of Commerce of El Paso is now considering the company's proposition. S. M. Schwartz, care of The Sheldon, El Paso, Texas, represents the company's projectors, who are of Chicago, Cincinnati, Boston and New York.

The proceedings of the fifth and sixth annual conventions of the Southern Cotton Spinners' Association, held at Atlanta and Charleston, respectively, have been published in book form, and make a volume of interest to everybody concerned with the progress of the textile industry in the South. The publication contains reports of the addresses of Mayor Livingston Mims of Atlanta, President John H. McAden, Mr. D. A. Tompkins, Mr. Richard H. Edmonds, Mr. J. K. Orr, United States Senator John L. McLaurin, Mr. Hoke Smith, Mr. George B. Hiss, Dr. C. S. Vedder, Mr. E. W. Thomas, Mr. Geo. E. Ladshaw and Mr. W. B. Smith Whaley. The association now has 316 members.

### QUOTATIONS OF COTTON YARNS.

By Buckingham & Paulson, New York, Philadelphia and Chicago, July 29.

No. 10s-1 and 12s-1 warps.....	13 1/2 @ 11
No. 14s-1 warps.....	14 @ 11
No. 16s-1 warps.....	14 1/2 @ 11
No. 20s-1 warps.....	14 1/2 @ 15
No. 22s-1 warps.....	15 @ 11
No. 26s-1 warps.....	15 1/2 @ 16
No. 6s to 10s yarn.....	13 @ 13 1/2
No. 12s-1.....	13 1/2 @ 14
No. 14s-1.....	14 @ 11
No. 16s-1.....	14 1/2 @ 11
No. 20s-1.....	15 @ 11
No. 22s-1.....	15 1/2 @ 16
No. 26s-1.....	16 @ 11
No. 8s-2 ply soft yarn.....	13 1/2 @ 11
No. 10s-2 ply soft yarn.....	13 1/2 @ 14
No. 8s-2 ply hard.....	13 1/2 @ 13 1/2
No. 10s-2 ply hard.....	13 1/2 @ 14
No. 12s-2 ply hard.....	13 1/2 @ 14
No. 14s-2 ply.....	14 @ 11
No. 16s-2 ply.....	14 1/2 @ 15
No. 20s-2 ply.....	15 1/2 @ 16
No. 24s-2 ply.....	16 @ 11
No. 26s-2 ply.....	16 @ 11
No. 30s-2 ply yarn.....	16 1/2 @ 22
No. 40s-2 ply.....	21 @ 22
No. 8s-3, 4 and 5 ply.....	13 1/2 @ 13 1/2
No. 20s-2 ply chain warps.....	14 1/2 @ 15
No. 24s-2 ply chain warps.....	16 @ 11
No. 26s-2 ply chain warps.....	16 @ 11
No. 30s-2 ply chain warps.....	16 1/2 @ 17
No. 16s-3 ply hard twist.....	14 1/2 @ 11
No. 20s-3 ply hard twist.....	15 @ 11
No. 26s-3 ply hard twist.....	16 @ 11

## PHOSPHATES.

### Phosphate Markets.

Office Manufacturers' Record, Baltimore, Md., July 30.

The local phosphate business is showing up in better form, and although trade is quiet, there are more inquiries than usual in the open market. Fertilizer men are still buying in small lots for immediate use. The reports from mining sections in the South are favorable, and the future development of the several fields is likely to be pursued with unusual enterprise during the remainder of the present year. The outlook in Tennessee is more encouraging; the scarcity of labor, which has retarded mining operations at Mt. Pleasant and others points, is to some extent being overcome by the arrival of laborers from different sections. The prominent companies are now preparing shipments for the foreign trade, and it may be stated that the market for export rock is a shade firmer. There is some domestic demand, and values continue steady, with holders firm in their views as to prices. The movement in South Carolina, while not of great volume, is considered healthy, and both foreign and domestic shipments have been going forward during the month. In the Florida field considerable activity is present, and the output has been considerably increased during the present month. In the pebble section miners are busy, and shipments from the various plants will be quickly absorbed by vessels at the ports awaiting cargoes. The shipments of high-grade Florida rock from all the ports have been liberal during the month, and prices for both hard rock and pebble continue firm and hardening.

### Fertilizer Ingredients.

The tone of the market for ammoniates is stronger, and the outlook for more activity is improving. Stocks in the West are still firmly held at outside figures. Both blood and tankage are stronger, and slightly advanced. Eastern buyers are taking more interest in the market, and numerous inquiries are coming from that source. There is only a moderate inquiry from Southern sources.

The following table represents the prices current at this date:

Sulphate of ammonia (gas).....	\$2 30 @ 2 35
Nitrate of soda, spot Balto.....	2 10 @ 2 15
Blood.....	2 32 1/2 @ 2 35
Azotine (beef).....	2 40 @ 2 45
Azotine (pork).....	2 40 @ 2 45
Tankage (concentrated).....	2 15 @ 2 17 1/2
Tankage (9 and 20).....	2 37 1/2 @ 10 1/2 2 40 @ 10
Tankage (7 and 30).....	21 00 @ 21 50
Fish (dry).....	27 50 @ 30 00

### Phosphate and Fertilizer Notes.

The schooner Anna L. Mulford cleared last week from Charleston, S. C., for Barren Island with 801 tons of phosphate rock, and the schooner Mary Curtis for Baltimore with 585 tons.

After several months of inactivity, the Summer Phosphate Co. has resumed operations at its mines north of Gallatin, and D. B. Anderson & Co., the contractors, have a force of over 100 men and boys mining rock and preparing it for market.

The Enochs Lumber & Manufacturing Co. of Jackson, Miss., has purchased from the Jackson Fertilizer Co. its old plant, and it is understood that the property was purchased with a view to enlarging the Enochs factory. The Enochs Company has now over 200 men employed, and under the new addition its output will be materially increased.

It is stated that the movement of phosphate rock from Mt. Pleasant, Tenn., has been much better for June and July. The Federal Chemical Co. has just completed a shipment of 17,500 tons. The Central Phosphate Co. is also engaged on a large shipment of export rock. There is still a scarcity of labor, which restricts shipments to a great degree.

The guano warehouse, together with sheds and outhouses and a large quantity of material, at New Berne, N. C., owned by the E. H. & J. H. Meadows Co., were destroyed by fire last week. The buildings and contents were valued at between \$20,000 and \$25,000.

It is reported that the Bowker Fertilizer Co. of Boston, Mass., has negotiated a merger with the American Agricultural Chemical Co. It is understood the Chemical Company will take over the Bowker Company on a basis not far from one share of Chemical preferred stock for each share of Bowker Company stock. The Bowker Fertilizer Co. has a capital stock of \$1,000,000.

The extensive plant of the Federal Chemical Co. at Nashville, Tenn., is being pushed rapidly to completion. The tower-room, acid building and furnace rooms have all been completed, and the heavy construction work on the main building is half done. The machinery will begin to arrive in a few days, and this monster fertilizer plant will be ready to operate about the middle of September.

### Cottonseed-Oil Notes.

The Annona Cotton Oil Co. of Annona, Texas, has increased its capital stock from \$50,000 to \$100,000.

The Longview Cotton Oil Co. of Longview, Texas, has been chartered, with a capital stock of \$40,000. The incorporators are C. W. Lawrence, J. J. Flewellen and G. A. Rogers.

The directors of the Planters' Oil Mill Co. at Sardis, Miss., held a well-attended meeting last week for the purpose of filling vacancies on the board. The mill thus far has proved a splendid success, and the outlook is very encouraging.

The Southport Cotton Delinting Co. of Rockingham, Richmond county, North Carolina, has been chartered, with a capital stock of \$50,000. H. L. Ledbetter and others are stockholders. The company will purchase and delint cottonseed and manufacture oil and fertilizers, etc.

At a meeting of the stockholders of the Cotton Oil Co. of Vienna, Ga., held last week in that place, the following officers were elected: Thomas Egleston of Atlanta, president; Joseph T. Orme of Atlanta, treasurer; John B. McDonald of Vienna, secretary, and Edward Howell of Vienna, general manager.

The Magnolia Oil & Fertilizer Co. has been incorporated, with a capital stock of \$25,000, which can be increased to \$100,000. The new company will establish a cottonseed-oil mill at Magnolia, Columbia county, Arkansas, and will also manufacture fertilizers. The incorporators are J. E. Smith, N. J. Gault, R. S. Warnock, J. C. McNeil, H. A. Longino, J. L. Davis and W. H. Harmock.

The following are official quotations on cottonseed and cottonseed products as posted at the Cotton Exchange in New Orleans on the 28th inst.: Prime refined oil in barrels, 43 cents per gallon; off refined oil in barrels, 42 cents per gallon; prime crude, loose, 36 cents per gallon; prime cottonseed cake, \$27 per ton of 2240 pounds; off do., nominal; prime cottonseed meal, \$27 per ton of 2240 pounds; off do., nominal; soap stock, none; linters, per pound—A, 3 3/4 cents; B, 3 1/2 cents; C, 3 1/4 cents; cottonseed in sacks delivered in New Orleans, \$16 per ton of 2000 pounds; in bulk delivered in New Orleans, \$15 per ton of 2000 pounds.

The transactions of the New England Cotton Manufacturers' Association at its annual meeting last April have been published in the usual attractive form under the editorship of Secretary C. J. H. Woodbury.



# CONSTRUCTION DEPARTMENT.

**THE MANUFACTURERS' RECORD** seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with every one interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

## ALABAMA.

Alabama—Coal Mines.—Thos. M. Waller of Hartford, Conn., is reported as to develop extensive coal fields in Southern Alabama in company with New York capitalists.

Birmingham—Oil-burner Factory.—Trott Fuel Burner Co. has been organized by John H. Peebles, T. T. Ashford and G. Ghisholm, for manufacturing a burner for fuel oil, to be used on ships and in industrial plants. The capital is \$10,000.

Huntsville—Cold-storage Warehouse.—A. J. Blonfin is in charge locally of construction of the \$100,000 cold-storage warehouse, reported last week, for Armour & Co., Chicago.

Huntsville—Cotton Mill, etc.—It is rumored that Merrimack Manufacturing Co. will at once arrange to double its plant of 25,000 spindles and 848 looms, also that it will establish a bleachery. G. T. Marsh is local agent.

Mobile—Tool Factory.—J. M. Trunk of Chunchula, Ala., is organizing a company to manufacture tool that comprises an anvil, pipe vise, drill, vise and handy or cut-off.

Mobile—Lumber Mill.—Incorporated: Enterprise Lumber Co., by F. F. Grotz, H. C. Beaven, W. H. Toenes and Hubbard Parker, and will build mill. Capital is \$3000.

Montgomery—Paint Factory.—J. T. Roberts contemplates establishing paint factory.\*

Tuscaloosa—Telephone System.—Southern Bell Telephone Co. has surveyed for extensions of its lines to Selma, Eutaw and Greensboro, in Alabama, and to points in Mississippi; will expend about \$25,000.

Wedowee—Gold Smelter.—Baltimore Mining Co. will erect a smelting plant at its gold mines. Sam Wallace of Aniston, Ala., is manager.

## ARKANSAS.

Corning—Telephone System.—Incorporated: Corning Telephone Co., to equip and maintain telephone exchange with long-distance connections. The capital is \$5000; incorporators, W. H. Wilsey, W. A. Beard and S. A. Wilsey.

El Dorado—Ice Plant.—Arkansas & Texas Consolidated Ice & Coal Co. of Pine Bluff, Ark., will build a branch ice plant.

El Dorado—Lumber Company.—Incorpo-

rated: El Dorado Lumber Co., capitalized at \$10,000, by C. P. McHenry, G. A. Rowland and J. H. Walsh.

England—Cotton Gin.—Beakley-Swain Gin Co. has been incorporated, with capital stock of \$30,000, by W. B. Beakley, president; T. P. Hutchinson, vice-president, and J. Swain, secretary.

Fordyce—Stave Manufacturing.—Hampton Stave Co. has increased capital from \$50,000 to \$125,000.

Kedron—Lumber Company.—Frank Kendall Lumber Co., with authorized capital of \$300,000, has been incorporated by Frank Kendall, N. T. White and others.

Lake Village—Building Supplies.—Chicot Building Supply Co. has been incorporated, with capital stock of \$10,000; Jas. C. Norman, president; W. G. Street, vice-president; A. G. Simms, secretary, and A. W. Witherington, general manager.

Little Rock—Timber Company.—Marquette Timber Co., with authorized capital stock of \$100,000, has been incorporated.

Little Rock—Lumber Company.—Johnson Lumber Co., with \$50,000 capital, has been incorporated by John Dermott, William T. Farrar, George W. Cleveland and William H. Johnson.

Magnolia—Cotton oil Mill.—Incorporated: Magnolia Oil & Fertilizer Co., to establish a cottonseed-oil mill and manufacture fertilizers. The capital is \$25,000. The incorporators are J. E. Smith, N. J. Gantt, R. S. Warnock, J. C. McNeill, H. A. Longino, J. L. Davis and W. H. Harmock.

Markle—Lumber Plant.—Hackley-Bonnett Lumber Co. of Grand Rapids, Mich., will establish a plant at Markle, expending probably about \$25,000.

Monticello—Cannery.—Monticello Canning Co. has been incorporated, with capital of \$5000, by F. H. Scott (president), B. A. Hardy, Walter Wilson, H. W. Wells and others.

Silica—Lumber Company.—Lena Lumber Co. has been incorporated by B. Faisst, C. Faisst, K. Wurtz and others, with capital stock of \$25,000.

Springdale—Water-works.—City has completed arrangements insuring the construction of the proposed water-works. C. J. Chapman is secretary, and has plans and specifications in charge.\*

Stuttgart—Electric-light Company.—Stuttgart Electric Light & Water Co. will increase capital stock from \$10,000 to \$50,000.

Yellville—Zinc Mining.—Incorporated: Four-Thousand-Acre Zinc & Lead Co., with its principal office at South Bend, Ind.; Henderson Adair, authorized agent at Yellville.

## FLORIDA.

Jacksonville—Cotton oil Refinery and Soap Factory.—Florida Cotton Oil Co., reported last week to increase capital by \$100,000, will construct cottonseed-oil refinery and soap factory. No contracts have been let as yet.

Paradise—Lumber Plant.—McDonald Lumber Co. has been incorporated, with capital of \$24,000, to manufacture lumber, etc. A. W. McDonald is president; J. B. McDonald, vice-president, and L. B. McDonald, secretary.

Perry—Lumber Plant.—Perry Lumber Co. has been incorporated, with capital stock of \$5000, for manufacturing general lumber; Edward Howell, president; L. A. Butler, superintendent, and J. P. Jones, secretary.

Tampa—Bottling Plant.—Tampa Coca-Cola Bottling Co., recently mentioned as proposed, has been incorporated, with capital stock of \$10,000, and will manufacture and bottle coca-cola and other beverages; Ernest A. Ricker, president; Jacob A. Meetze, vice-president, and Sydney R. Sharpe, secretary.

## GEORGIA.

Athens—Knitting Mill.—Board of Trade is corresponding with a New York manufacturer who contemplates establishing a \$30,000 knitting mill in the South.

Atlanta—Pharmaceutical Manufacture.—C. S. Morse, R. F. Watson and H. Preiss have incorporated Atlanta Pharmaceutical Co. for manufacturing pharmaceutical articles; capital \$5000, with privilege of increase to \$50,000.

Dallas—Knitting Mill.—T. M. Sanders and J. B. Watson are forming \$25,000 company to build knitting mill. St. Louis capitalists will furnish \$15,000.

Missoula—Fire-brick Works.—F. L. Miller, G. H. Miller, J. H. Barnes, C. C. Ellis, J. D. Rust and S. D. McReynolds, all of Chattanooga, Tenn., have incorporated Mil-

ler Barnes Fire-Brick Co., with capital stock of \$15,000. The company will equip plant for weekly capacity of 50,000 fire-bricks.

Montezuma—Saw-mill.—J. S. Lavender will build a saw-mill.

Ringgold—Cotton Mill.—It is proposed to form company to build cotton mill. W. H. Odell can probably give information.

Valdosta—Cotton Ginnery.—Valdosta Ginning Co., mentioned last week, will be incorporated with Howard Harris as general manager. Company has let contract to Knight & Redding for construction of 32-gin plant reported last week, but said plant will cost \$20,000 (not \$50,000, as had been reported). The company is a branch of Interstate Ginning Co., composed of New York, Valdosta and Savannah parties. All machinery has been purchased.

Valdosta—Drug Company.—Paine-Dunaway Drug Co. has been incorporated, with capital of \$5000, by E. P. Dunaway and others.

Waycross—Oil Wells.—J. S. Sharp proposes organizing company to drill for oil.

## KENTUCKY.

Bardstown—Barrel Factory.—John Newman will establish barrel factory.

Bardwell—Electric-light Plant.—City contemplates installing an electric-light plant, to be operated in connection with its water-works now being completed. Address "The Mayor."

Catlettsburg—Mercantile.—Incorporated: D. H. Carpenter Company, \$75,000 capital stock, by D. H., C. P. and Frank Carpenter.

Covington—Coal Mines.—Covington Coal Co. will increase capital stock from \$45,000 to \$50,000 for the purpose of enlarging its business.

Dawson Springs—W. N. Stice has decided to build flour mill, reported last week as contemplated; will expend about \$8000 for plant of sixty barrels capacity; will also manufacture feed.\*

Eminence—Electric Plant.—J. C. Helburn, J. A. Crabb and G. A. Holland have obtained franchise for construction of electric plant.

Frankfort—Mining.—E. M. Blakeman, Woodson Lewis and A. W. Howard have incorporated Silver Well Mining Co., with capital stock of \$50,000.

Louisville—Carriage Company.—Incorporated: Union Carriage & Hattan Co., \$50,000 capital stock, by L. O. Etheridge, W. B. Halley and C. B. Conway.

Louisville—Incorporated: Yates Bros. Co., with \$50,000 capital, by R. H. Yates and O. C. Yates of Louisville, and Ben S. Clarkson of Big Spring, Ky.

Louisville—Building-block Factory.—Incorporated: Concrete Building Block Co., capital stock \$10,000, by A. C. Montenegro, A. S. Robertson and J. L. Kiehm. The company will manufacture and sell artificial stone and concrete blocks.

Ludlow—Shoe Factory.—Incorporated: John Moloney Shoe Co., with \$30,000 capital, to manufacture ladies' shoes. The incorporators are A. C. Oppenheimer, J. W. Savage, A. V. Grant and R. H. Fleming.

Pineville—Coal Mines.—National Coal & Iron Co. will expend \$175,000 for improvements and to increase the capacity of its mines in Bell county. Max Barker of Louisville, Ky., is general manager.

Searcy (P. O. at Waco)—Brick and Tile Works, etc.—Waco Mining & Manufacturing Co. has been organized, with capital stock of \$60,000, by L. E. Pearce, president; Chas. J. Norwood, vice-president; P. Dickey of Lexington, Ky., secretary, and W. P. Talbot of Paris, Ky., treasurer. Company has purchased C. L. Searcy's brick, tile and terracotta plant, and will enlarge same, introducing the manufacture of additional clay pottery.

Seven Hills—Creamery.—R. E. Alexander, J. H. Nave, J. E. Field and others have incorporated Seven Hills Creamery Association, with capital stock of \$6000.

## LOUISIANA.

Crane—Saw-mill.—Jas. E. Ball may possibly rebuild his saw-mill recently burned.

Jennings—Oil Wells.—McFarlain Oil & Pipe Line Co. has been incorporated, with capital stock of \$250,000, to drill for oil. A. J. McFarlain is president; W. R. Conklin, vice-president, and C. E. Wooten, secretary.

Lake Charles—Iron Works, etc.—Calcasieu Iron Works & Mill Supply Co., Ltd., has been

organized, with capital stock of \$20,000, to conduct boiler works, foundry and machine shops and mill-supply store; A. McKinnon, president and manager; F. W. Hansen, vice-president; H. McKinnon, secretary, and L. A. Goudreau, treasurer.

Lake Charles—Feed Mill.—J. C. Elstner has let contract for construction of feed mill with daily capacity of 2000 bushels.

New Orleans—Oil Production and Transportation.—Lone Star & Crescent Oil Co. has accepted the proposition of J. K. Newman and Sydney H. March for reorganization of the company. The new capitalization will be \$5,000,000. The company owns and controls producing wells in the Beaumont district, and will transport oil by pipe lines to various markets. Twenty tanks of 55,000 barrels capacity each and additional pumping stations will be built at or near Port Arthur, Texas; company's offices in Hennen Building, New Orleans.

New Orleans—Cotton Compresses.—It is proposed to organize under one corporation the twenty square-bale compresses. New York capitalists will be largely interested. S. B. McConico, Hennen Building, New Orleans, is endeavoring to complete the deal.

New Orleans—Macaroni Factory.—Southern Italian Paste Factory, Ltd., has been incorporated, with capital of \$10,000, for manufacturing macaroni and other Italian pastes; Alcide Willox, president; E. B. Willox, vice-president, and Dalton Williams, secretary.

New Orleans—Transportation Company.—Mississippi River Transportation Co. has been incorporated, with capital stock of \$200,000, for water and rail transportation purposes; Chas. G. Coyle, president; Wm. A. Duke, vice-president, and W. G. Coyle, secretary.

New Orleans—Swamp-land Reclamation.—It is stated that Messrs. N. A. Baker, I. R. Holmes and C. S. Penfield of Laporte, Texas, and Benton Bros., bankers, of Des Moines, Iowa, have about closed the purchase of 110,000 acres of swamp land in St. Bernard and Plaquemine parishes. The purchasers' purpose is said to be the construction of canals, levees, etc., to reclaim the land and develop it agriculturally and otherwise. The purchasers were registered at St. Charles Hotel during the week.

New Orleans—Round-bale Compress Works, Boland & Gachwind have secured control of patents on a new round-bale compress, and will build extensive machine shops and foundries for manufacturing same.

Rayville—Cotton Ginnery.—W. T. Cook will build cotton ginnery.

Tangipahoa—Saw-mill.—Day Bros. Lumber Co. has purchased 25,000 acres of pine timber lands at \$10 per acre, and will erect a large milling plant to develop its timber.

## MARYLAND.

Baltimore—Coal Company.—Incorporated: Diggs Bros. Co., for dealing in coal, lumber and wood, by James Diggs, Albert Diggs, James Shriver, Fred D. Miller and Charles E. Fink. The capital stock is \$25,000.

Baltimore—Molasses Company.—Incorporated: Charles W. Shaw Company, for dealing in syrups and molasses, by Charles W. Shaw, Thomas Elliott Shaw, James S. Moon, Anna M. Shaw, Ida M. Gill and Thomas M. Hoffman. The capital stock is \$20,000.

Baltimore—Art Dealers.—Incorporated: Meyers & Hedian Art Co., for dealing in pictures and art goods, by Maurice T. Lane of Evanston, Ill., and Charles H. Lane, Albert S. Wightman, J. Harry Williams and Frank H. Clark of Baltimore. The capital stock is \$50,000. Address Chas. H. Lane.

Baltimore—Excelsior Machine Works.—American Excelsior Machine Co., lately reported incorporated with \$100,000 capital, has organized with J. W. Leroux, president; Jas. R. Bate, general manager, and J. M. Lyall, secretary. Company will build and improve excelsior machine under patent of Jas. R. Bate, and will also manufacture excelsior; offices, 508 Union Trust Building.

Baltimore—Shirt Factory.—E. Rosenfeld & Co., shirt manufacturers, are considering plans for construction of a factory building 60x138 feet, eight stories high, strictly fire-proof, to cost over \$60,000.

Baltimore—Hardware Company.—Incorporated: Payne Hardware & Farmers' Supply Co., by John F. Hilgeman, John Lange, Lawrence Hilgeman, William Eulich and John Thomas Schen, for buying and selling iron, steel, metal implements and farming supplies. The capital stock is \$25,000.

Barton—Coal Mining, etc.—Moscow George's Creek Coal Co. is opening new drifts and installing modern machinery, including electrical equipment for mining operations. It is probable that coke ovens will be erected.

Delta—Slate Quarries.—Campria Slate Co. has been incorporated, with capital stock of \$100,000, and acquired about 100 acres of land whereon it will develop slate quarries. Waste product will be manufactured into cement, etc. Address care Union Trust Co., Fayette and Charles streets, Baltimore, which will finance the company.

Hancock—Apple Orchard.—Tonoloway Orchard Co. has been incorporated to develop 800 acres of land as an apple orchard. H. E. Van Deman of Washington, D. C., is president; T. C. McGoffin, also of Washington, secretary, and Edmund P. Cobill of Hancock, treasurer.

Oakland—Real Estate.—Incorporated: Garrett Real Estate Co., with capital stock of \$10,000; president, R. A. Ravenscroft of Accident, Md.; treasurer, A. G. Sturgiss; secretary, F. A. Thayer.

#### MISSISSIPPI.

Aberdeen—Vehicle Factory.—E. P. Renshaw of Hopkinsville, Ky., will establish buggy and carriage factory.

Biloxi—Cannery, etc.—Barataria Canning Co. (canner of sea products) proposes erecting a plant for pulverizing oyster shells and for the utilization of sea products.\*

Collins—Mercantile.—Incorporated: W. L. Williamson Co., capital stock \$20,000, by J. A. McCain, C. E. Williamson, W. L. Williamson and C. C. Myer.

Florence—Oil Wells.—Incorporated: Florence Oil Co., capitalized at \$10,000, by W. P. Reese, James J. Cole, C. V. Patterson, W. P. Mounger and K. W. Grafton.

Gulfport—Land Company.—Chartered: Gulfport Land & Lumber Co., capital stock \$20,000, by J. R. Pratt, G. R. Brothers, S. P. Moorman and others.

Iuka—Lath Mill.—Geo. L. Forrest & Co. will establish lath mill.

Jackson—Lumber Plant. Enoch Lumber & Manufacturing Co. is reported as to enlarge its plant.

Meridian—Grocery.—Incorporated: Tom Lyle Grocery Co., capital stock \$50,000, by Tom Lyle, J. W. Stanton, F. G. Lewis and others.

Poplarville—Ice Plant, Brick Works, etc.—Poplarville Realty & Manufacturing Co., reported last week as organized, has elected W. A. Gill, Jr., secretary, and will apply for charter. It proposes building an ice plant, brick works, handle factory and telephone exchange.\*

Seminary—Lumber Plant.—Mason Lumber Co., reported last week with \$30,000 capital, is completing plant of saw-mill, dry-kiln, planing mill, etc., with capacity of 45,000 feet per ten hours. About \$25,000 will be expended. J. W. Post is secretary, and A. L. Lehmann, general manager.

Tupelo—Oil Mill.—Tupelo Cotton Oil Co. will increase capital \$25,000 to enlarge its plant.

Wiggins—Saw mill.—It is rumored that the Pinkline Lumber Co. of Des Moines, Iowa, will build saw-mill with daily capacity of 125,000 feet.

Yazoo City—Electric-light and Water Works, etc.—W. G. Kirkpatrick of Jackson, Miss., will prepare plans and specifications for the \$20,000 water-works, electric-light plant and sewerage system mentioned last week.

#### MISSOURI.

Mansfield—Lead and Zinc Mines.—Zella M. Mining Co. has been incorporated, with capital stock of \$1,000,000, to develop 320 acres of lead and zinc lands and an onyx cave. A mill of 100 tons capacity will be erected at an early date. Capt. A. Arnold, 1306 Roberson avenue, Springfield, Mo., is consulting engineer. L. M. Lane is president, and Clara E. Lane, secretary.

Marshall—Oil Wells.—Saline Oil & Development Co. has organized with Joseph Hamill, president; R. D. Burchard, secretary; J. R. Phillips, assistant secretary; J. P. Huston, treasurer; capital \$25,000.

#### NORTH CAROLINA.

Arapahoe—Telephone Line.—Jos. M. Reel will construct telephone system to Reelsboro, ten miles distant.

Arapahoe—Cotton Ginnery.—Jos. B. Lee contemplates erecting cotton ginnery.

Asheville—Finishing Works.—Appalachian Finishing Works will be incorporated, with capital stock of \$350,000, for corduroy finishing, dyeing and weaving, by Wm. Whittam, Jr., W. T. Weaver and others.

Asheville—Oil Wells.—W. F. Houser, Philip Marks and Henry Helmsburg, all of Columbus, Ohio, will drill for oil.

Asheville—Talc Manufacturing.—National Manufacturing Co., J. H. Shippl, manager, is to be organized to manufacture articles from talc.

Burgaw—Cannery.—W. M. Hand will establish an additional cannery. The equipment has been purchased.

Concord—Water-works.—City had decided to expend about \$70,000 for construction of the water-works recently reported. Supply will be secured from deep wells. J. L. Ludlow of Winston, N. C., is engineer in charge.

Elizabeth City—Knitting Mill.—Elizabeth City Hosiery Co., reported incorporated last week, will continue Elizabeth City Knitting Mills. P. H. Williams is manager.

Jacksonville—Saw-mill.—T. R. Kerr expects to build saw-mill to replace plant recently burned.

Lexington—Chair Factory.—Elliott Chair Co. has organized, with a capital stock of \$20,000, and privilege to increase to \$100,000; incorporators, W. G. Penry, J. F. Ward, Geo. W. Montcastle, S. E. Williams, J. A. Elliott and James Adderton. Company will build chair factory. Address J. A. Elliott, secretary.\*

Raleigh—Novelty Company.—Incorporated: Geer Novelty Co., capital stock \$10,000, with Napoleon Leder, president; George Geer, vice-president; C. W. Bourne, secretary.

Raleigh—Mantel Factory.—Incorporated: Zachary Mantel Co., with a capital stock of \$25,000, by A. D. Zachary, John E. Bridges and R. J. Hughes, for the manufacture of mantels, tiling, grates, etc.

Rockingham—Cotton Delintery.—Southern Delinting Co. has been incorporated by H. L. Ledbetter and others to delint cotton, etc. Capital stock is \$50,000.

Salisbury—Gold-mining Plant.—Oddie Copper Co. is reported as to build a large reduction plant to utilize electricity for separating the ores.

Sanford—Electric-light Plant.—It is reported that R. V. Hildans, Jr., has announced that T. M. Campbell (now of Buin, Pa.) will build a \$5000 electric-light plant in Sanford.

Swansboro—Lumber Plant.—Swansboro Lumber Co. is erecting an additional mill 26x36 feet, to be equipped for a daily capacity of 20,000 feet.

Waxhaw—Cotton Ginnery.—J. A. Estridge will build a large cotton ginnery.

#### SOUTH CAROLINA.

Anderson—Foundry, etc.—Chartered: Anderson Machine & Foundry Co., capital stock \$10,000, by C. S. Sullivan, R. E. Burris, W. S. Brock, C. A. Gambrell and A. S. Farmer.

Anderson—Foundry and Machine Shops.—C. S. Sullivan will organize company to establish foundry and machine shops.

Batesburg—Cotton Ginnery.—Incorporated: Batesburg Ginnery Co.; M. E. Rutland, president; A. C. Phelps, vice-president, and A. M. Withers, secretary.

Chesterfield—Telephone System.—Chartered: The Chesterfield Telephone Co., by John A. Welsh, Dr. D. T. Seal, J. P. Mangum, A. M. Moore, W. P. Swinnie and R. E. Rivers, to erect and maintain telephone line from Chesterfield to Cheraw. The capital is \$3,000.

Columbia—Lumber Plant.—Columbian Lumber & Manufacturing Co. has been incorporated with W. A. Heath, president; J. C. Otis, secretary, and W. M. Otis, manager. General woodworking plant has been completed.

Columbia—Drug Manufacturing.—Incorporated: Tannopiline Manufacturing Co., to manufacture tannopiline and other drugs, by L. B. Dozier, Julius H. Walker and Dr. U. R. Roumillat. The capital stock is \$50,000.

Easley—Cotton Mill.—Easley Cotton Mill's addition, lately referred to, will include 16,000 spindles and 380 looms; all machinery bought, but not mill supplies. J. E. Sirrine of Greenville, S. C., is architect in charge; work now in progress.

Georgetown—Lumber Company.—Chartered: Emerson Lumber Co., by O. E. Emerson, P. Matthews, A. Jewett; capital stock \$10,000.

Greenville—Cotton Mill.—J. I. Westervelt proposes forming \$40,000 company to install machinery in an abandoned cotton-mill building.

Greenville—Grain Company.—L. I. Jennings, John M. Dickson and J. B. Jennings have incorporated Carolina Grain & Provision Co., with capital of \$1500.

Greenville—Mercantile.—Incorporated: Bates-Tannahill Company, by Eugene T. Bates, Samuel Tannahill and Robert N. Tannahill. The capital stock is \$25,000.

Greenwood—Mercantile.—J. K. Durst, J. L. Andrews, E. D. Andrews and R. J. Cartledge have incorporated Durst-Andrews Company, with capital stock of \$30,000.

Spartanburg—Woodworking Factory.—J. C. Rigby will establish general woodworking factory.

St. Matthews—Electric Plant.—L. M. Able will establish electric-lighting and power plant. Contract for machinery has been placed.

St. Matthews—Telephone System.—Incorporated: St. Matthews Telephone Exchange, by L. M. Able, J. S. Wanamaker, H. A. Raynor, M. Jarecy and S. Pearlina. The capital is \$1500.

#### TENNESSEE.

Arlington—Brick Works, etc.—Incorporated: East Tennessee Brick Co., capital \$1500, and the Arlington Improvement Co., capital \$12,000, each incorporated by R. L. Bruner, Tate L. Earnest, John H. Bowman, S. C. Williams and Walter A. Bowman.

Butler—Lumber Mill.—It is rumored that Messrs. Luppert & Harman of Williamsport, Pa., will build large lumber plants near Butler.

Chattanooga—Stogie Factory.—E. B. Tisher proposes organizing company to establish stogie factory.

Chattanooga—Fluid-extract Plant.—United States Leather Co. has completed local arrangements for the establishment of an extensive plant for the manufacture of fluid extracts from cheap wood. It is said \$150,000 will be expended.

Memphis—Paper-box Factory.—Wm. Floyd, A. S. Baldwin, J. Pierce, F. C. Huse and A. Goodman have incorporated Memphis Paper Box Co., with capital stock of \$5000, for manufacturing paper boxes.

Monroe County—Timber-land Development.—It is reported that W. H. Carpenter and others of Coudersport, Pa., have purchased 1000 acres of timber lands, and will develop same, constructing railroad to facilitate the operations.

Murfreesboro—Ice Plant.—J. H. Howe, W. P. Howe, A. M. Carroll, Geo. S. Parks and others have incorporated Murfreesboro Ice Co., with capital stock of \$20,000, for manufacturing ice.

Nashville—Iron Furnaces, Coal Mines, etc. Hon Air Coal & Iron Co. (reported last week, capitalized at \$5,000,000) is making extensive improvements to the properties it acquired. It will own over 125,000 acres of coal and iron lands, four blast furnaces, ore mines and coke ovens for its own purposes, and mines producing coal for general domestic, gas and steam purposes. A new shaft being opened will by January 1 be producing 1500 tons daily, and a number of coke ovens are being constructed. Present developments and those contemplated will cost about \$250,000, and most of the required new equipment has been purchased. J. M. Overton is manager.

Nashville—Bridge Construction.—Mention was made last week that Tennessee Central Railroad had let contract for construction of two piers of masonry work for proposed bridge across the Cumberland river. The contract was awarded to A. R. Stewart of Columbia, S. C. (not to Stewart & Co. of St. Louis, as was erroneously stated last week), and amounts to over \$50,000.

Ooltewah—Lime Works.—Chattanooga Lime Co. has been incorporated, has purchased and will continue the lime works of Thatcher Lime Co. and J. D. Wooten, both at Ooltewah, and the works of W. F. Hale at Graysville, Ga. H. H. Buquo is president, and S. J. Buquo, secretary, both of Chattanooga, Tenn., with offices in the Times Building, that city.

Sparta—Excelsior Factory.—Sparta Excelsior Co. has been organized with C. M. Gist, manager, to establish factory.\*

#### TEXAS.

Ambrose—Mercantile.—Zac Smith, J. B. Moore and E. D. Steger and others have incorporated Ambrose Mercantile Co., with capital of \$10,000.

Annona—Oil Company.—Annona Cotton Oil Co. will increase capital stock from \$50,000 to \$100,000.

Austin—Railway Shops.—Austin Electric Railway Co. has let contract for construction of its machine shops reported last week. Fischer & Lambie have contract for rock structure and C. W. Moore for frame and iron shed 55x190 feet.\*

Beaumont—Compressed-air Plant.—Company will be organized to build compressed-air plant to raise fuel oil from wells in the Beaumont district. H. L. Garland of Chicago is engineer in charge, and was registered at Denechaud Hotel, New Orleans, during the week.

Beaumont—Electric Supplies.—Incorporated: Tuggle Electric Supply & Construction Co., capital stock \$25,000, by G. W. Tuggle, E. L. Bacon, J. F. Keith, I. D. Poik and D. Call.

Beaumont—Brewery.—Beaumont Ice & Brewing Co., proposed to be organized with capital of \$250,000, will have as directors Messrs. Geo. Adams, S. H. Van Woner, Sam Park, O. B. Grieves and others. It is stated the required capital is practically assured.

Beaumont—Oil Wells.—Chartered: Triple Alliance Oil Co., capital stock \$20,000, by W. E. Griffith, R. A. Greer, C. K. McFadden and W. H. P. McFadden.

Caton—Cotton Gln.—J. S. Caton, J. G. Guest, C. Smith, Q. D. Dean and others have incorporated Caton Gln Co., with capital stock of \$12,000.

Cleburne—Hardware Company.—McClough Hardware & Saddlery Co. has been incorporated, with capital of \$10,000, by W. McClough, J. A. Easterwood and J. H. Keith.

Corsicana—Oil Wells.—Chartered: Citizens' Oil Co., capital stock \$15,000, by W. M. Tatum, C. W. Chester, W. M. Peck and others.

Dallas—Ice and Cold-storage Plant.—Anheuser-Busch Brewing Association of St. Louis, Mo. (trading in Texas as August A. Busch & Co.), is reported as to erect a \$400,000 ice and cold-storage plant.

Dallas—Publishing.—Southern Young People's Co. has been incorporated, with capital of \$20,000, by Edwin J. Klest, Fred E. Johnston, Frank P. Holland and others.

Dallas—Fuel Company.—Incorporated: Southern Fuel Co., capital stock \$40,000, by C. W. Dawley, H. W. Adams and E. G. Hickey.

El Paso—Cotton Mill.—Foreign capitalists propose incorporating Union Milling & Manufacturing Co., with capital stock of \$1,000,000, to establish mill for weaving cotton cloth and manufacturing shirts, trousers, etc. S. M. Schwartz, care of The Sheldon, represents the projectors.

El Paso—Water-works.—Jonathan S. Dodge has made the city a proposition for water supply.

El Paso—Onyx Beds.—J. R. Patterson, J. B. Blessing and Fred Richardson plan the development of onyx beds.

Fort Worth—Machine Shops.—It is reported that Swift & Co. and Armour & Co., both of Chicago, will construct a joint machine shop, to be operated in connection with their extensive abattoirs and packeries now being built.

High—Telephone Company.—McD. High, Fred Roach and B. W. Price have incorporated Farmers' Telephone Co. to construct telephone line from High to Roxton, Brookton and Petty. Capital is \$7000.

Houston—Optical.—Houston Optical Co. has been incorporated, with capital stock of \$20,000, by W. W. Chamberlain, C. C. Higgins, Edgar Watkins and A. S. Kelling.

Houston—Lumber Manufacturing.—Incorporated: Houston Lumber & Manufacturing Co., capital stock \$10,000, by J. R. Bondurant, H. B. Williams and E. P. Hudson.

Jasper—Brick Works.—Incorporated: The Brick Company of Jasper, capital stock \$20,000, by E. N. Stone, E. A. Peffley, W. P. Cooke and others, for manufacturing bricks.

Kildare—Lumber Company.—Incorporated: Kiote Lumber Co., capital stock \$10,000, by E. S. Hooper, J. K. Heath and J. P. Rand.

Longview—Cotton-oil Company.—Incorporated: Cotton Oil Co., capital stock \$40,000, by C. W. Lawrence, J. J. Flewelen and G. A. Rogers.

Oliphant—Walker County Lumber Co. (reported with \$100,000 capital under Houston last week) has acquired the complete plant of C. D. Oliphant. Construction of water-works is contemplated.

Paris—Brick Works.—Chartered: Texas White Brick Co., capital stock \$50,000, by W. R. Eubanks, George F. Hicks, D. H. Scott, B. J. Baldwin and H. S. Bettes.

San Angelo—Telephone System.—San Angelo Telephone Co. will expend about \$6000 to improve its system.

Seguin—Irrigation System.—Dudley D. Baker (address Box 45) will establish system to irrigate 175 acres of land.

Sherman—Water-works and Sewer Betterments.—On August 19 city will vote on proposition to issue \$50,000 municipal bonds, \$30,000 of which will be for betterment of the water supply and \$20,000 for betterment of the sewerage system, contemplating the extension of both. Address "The Mayor."

Sweetwater—Electric-light and Water Works.—The town has been incorporated with a view to arranging for construction of water-works and electric-light plant. Address "The Mayor."



**Temple-Tank Works.**—T. L. Hollingsworth is equipping plant for the manufacture of iron cisterns, etc.

**Temple-Oil Company.**—Chartered: Temple Fuel Oil Co., capital stock \$10,000, by R. L. Barclay, W. E. Hall and W. T. Bissonette.

**Texarkana—Lumber Company.**—Incorporated: Southern Pine Lumber Co., capital stock \$300,000, by T. L. L. Temple, George Webber of Texarkana, Ark.; C. M. McWilliams of Texarkana, Texas; Watson Walker, Charles Frederick and William Ashford of Diboll.

**Waco—Ice Plant.**—Incorporated: Crystal Ice & Storage Co., capital stock \$75,000, by R. H. Downman, J. L. Dreifelbis and J. W. McWilliams.

#### VIRGINIA.

**Ashland—Telephone System.**—Rosewell Page, Carter Reid and W. C. Newman propose establishing a telephone system. For information address W. C. Newman at Ellersson, Va.\*

**Farmville—Tobacco Factory.**—D. T. Elane contemplates installing a new drying equipment in his tobacco factory.

**Leesburg—Power Plant.**—Wallace George, Thos. Whipple and others will establish plant to develop power and distribute same for manufacturing purposes.

**Luray—Bridge.**—City will construct an iron bridge to cost probably \$1500. Address "The Mayor."

**Newport News—Water-front Developments.**—Waterview Development Co. has been incorporated, with capital of \$10,000, for general development purposes. Dillard Mundy is president; W. E. Cottrell, vice-president; A. L. Powell, treasurer, and F. J. King, secretary.

**Norfolk—Fire-extinguisher Factory.**—Phoenix Fire Fighter Co., recently chartered, is preparing to build factory; Charles M. Barnett, president.

**Richmond—Brewery.**—Rosenegk Brewing Co. will discuss the plans for enlarging the storage plant and other departments of brewery. Between \$50,000 and \$75,000 will be the estimated cost of improvements.

**Richmond—Electric and Steam Plant.**—P. T. Marye has submitted plans for boiler-house (for heating plant), also for electric-lighting and power plant to supply the penitentiary buildings. Address penitentiary building committee.

#### WEST VIRGINIA.

**Arroyo—Cannery.**—Incorporated: C. & M. Preserving Co. of Arroyo, W. Va., for canning and preserving fruits and vegetables; capital stock \$10,000; incorporators, Alex. Campbell, Jr., W. C. Bates, Lee Duval, Alex. R. Campbell and B. L. McLure of Wheeling.

**Charleston—Grain Elevator and Mills, etc.**—Charleston Milling & Produce Co. has incorporated, with capital stock of \$200,000; Peter Silman, president; John D. Lewis, secretary; Jackson Carr, business manager, and H. W. Sentz, assistant manager. Company proposes to build mill with daily capacity of 400 barrels of flour, 1000 bushels of meal and fifty tons of feed; four-story building 100x105 feet will be erected to house the machinery.

**Clarksburg—Glass Works.**—A correspondent states that Harry D. Vaughn and others of Dunkirk, Ind., will build glass works at Clarksburg.

**Clarksburg—Coal Mines.**—Chiefton Coal Co., E. A. Humphreys, president, has begun construction of mining plant to cost \$100,000, located on its coal lands.

**Durbin—Tannery.**—United States Leather Co. (executive offices in New York city) will establish a large tannery at Durbin.

**Fairmont—Flour Mill.**—Mountain City Mill Co., reported last week as selecting site for \$25,000 building, will conduct a general mill business.\*

**Macdonald (P. O. at Scarbro)—Coal Mines, etc.**—Stuart Colliery Co., recently reported, includes about 4190 acres of coal land in its proposed developments, and has signed contracts with D. M. Rosser of Kingston, Pa., for sinking two shafts. There will be facilities at each shaft for output of 1500 tons daily. Samuel Dixon is president.\*

**Mannington—Tannery.**—Incorporated: Southern Tanning Co., capital stock \$150,000, by Samuel G. Maxwell, George H. Maxwell, Charles W. Benedict of Titusville, Pa.; Chas. E. Gilbertson of Hutton, Md., and Creighton McCullough of Mannington.

**Marlington—Tannery.**—United States Leather Co. (executive offices in New York city) will establish a large tannery at Marlington.

**Martinsburg—Axle Works.**—Board of Trade is negotiating with New York parties for the establishment of axle works.

**Martinsburg—Oil Wells.**—Incorporated: Doddridge Oil Co., for oil and gas producing; capital stock \$500,000; incorporators, Edwin M. Hammond, John J. Koplan, James R. Maguire, B. T. Spencer, Jesse E. Inman, all of Baltimore, Md.

**Morgantown—Woodworking Plant.**—Incorporated: Valley Woodworking Co., to manufacture hardwood and other housefittings; capital stock \$25,000; incorporators, George C. Sturgiss, J. B. McGara, Robert McCreery, H. L. Swisher and L. McGara. Plant will be built. J. B. McGara is architect and contractor.\*

**Morgantown—Coal Mines.**—Incorporated: A. C. Fulmer Coal Co., to mine coal and manufacture coke, capital stock \$300,000, by A. C. Fulmer, H. B. Fulmer, C. W. Fulmer, E. O. Fulmer and Isadore Fulmer.

**Parsons—Milling, etc.**—Incorporated: Parsons Milling & Mercantile Co., capital stock \$20,000, by W. H. Dasher, H. K. Grubb, E. J. Billings, Wilbur Young and J. F. Long.

**Sistersville—Explosives Factory.**—Incorporated: French Torpedo Co., to manufacture nitro-glycerine and other explosives; capital \$200; incorporators, F. F. French, W. G. Agnew, M. Keating, A. B. Hunt of Sistersville, and J. T. Sweeney of St. Marys, W. Va.

**Wheeling—Oil Wells.**—Abe Cox Oil Co. has been incorporated, with capital of \$25,000, to drill for oil. The incorporators are C. W. Bente, Richard Ryan, Charles Larue and J. E. McCully, all of Wheeling, and Abraham Cox of Bethany, Ohio.

**Wheeling—Oil Wells, etc.**—Incorporated: Valley Mutual Oil Co., to develop land for producing oil, gas, stone, coal and iron; capital stock \$75,000; incorporators, Harvey M. Harper, William H. Grant, Charles Wickham, Sumner C. Palmer, Gerard A. Abbott, all of Chicago.

**Wheeling—Lamp Factory.**—Incorporated: Joseph Lamp Co., to manufacture lamps; capital stock \$10,000; incorporators, Joseph W. F. Shaffer, George P. Folmar, John Hunker and A. M. Schenck.

#### INDIAN TERRITORY.

**Ardmore—Railroad Shops.**—St. Louis & San Francisco Railroad will build shops. B. L. Winchell of St. Louis, Mo., is general manager.

**Henrietta—Coal Mines.**—Incorporated: Henrietta Coal Co., with capital of \$25,000, by Eli P. Williams, Anthony Crafton, Sarah Crafton, P. S. Williams, John M. Hoyt and I. N. Ury.

**Hugo—Railroad Shops.**—St. Louis & San Francisco Railroad will build machine shops and roundhouses for use by Arkansas & Choctaw Railroad. B. L. Winchell of St. Louis, Mo., is general manager.

**Lehigh—Electric Plant.**—Choctaw Construction Co. has been organized to build electric power-house, etc., for Lehigh Traction Co. Laufketter-Benditt M. E. Co., 810 Olive street, St. Louis, Mo., has been engaged as consulting engineer, and is now preparing plans and specifications.\*

**Okemah—Cotton Gins.**—Incorporated: Okemah Gin, Oil & Milling Co., with a capital of \$10,000, by J. D. Keaton, W. H. Dill, John D. Richards, Terry Rodkey and W. Y. Dille.

**Wilburton—Coal Mines and Coke Ovens.**—Great Western Coal & Coke Co. has been incorporated, with capital of \$300,000, and acquires operating mines and ovens. Wm. Busby is president; J. F. Steele, vice-president; W. S. Andicott, secretary.

#### OKLAHOMA TERRITORY.

**Andarko—Water-works.**—City has accepted plans for construction of its proposed \$40,000 water-works. Plans are by Burns & McDonnell of Kansas City, Mo., and they will superintend awarding contract.

**Cashion—Brick Works.**—Chartered: Cashion Brick & Oil Co., capital \$30,000, by C. P. Anderson of Cashion, A. Z. Clark and O. E. Strickie of Guthrie.

**Guthrie—Mercantile.**—Emil L. Hirschi, Harry F. Knedle and others have incorporated Hirschi & Knedle Company, with capital of \$10,000.

**Lawton—Mining, etc.**—Great Western Oil & Mining Co. has been incorporated, with capital stock of \$2,000,000, to develop mines, drill for oil, etc., by John L. Sponsler, J. H. Adams, John Tracy and others.

**Perry—Mercantile.**—Incorporated: Ben Cole Mercantile Co., capital \$6500, by Ben Cole of Perry, Mrs. I. Parina and Justice J. Kempner of Little Rock, Ark.

**Municipal Bonds.**—Bids on \$20,000 worth of 5 per cent. water and light improvement bonds for the city of Rayne, La., will be received on or before August 30, 1902, by O. Broussard, mayor.

#### BUILDING NOTES.

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

**Abilene, Texas—School Buildings.**—City will expend \$20,000 for erection of two school buildings. Address "The Mayor."

**Alexandria, La.—Courthouse.**—F. B. & W. S. Hull of Jackson, Miss., have contract at \$71,000 for construction of courthouse.

**Alexandria, La.—Bridges.**—Shreveport & Red Valley Railroad will construct two steel drawbridges. P. McIlvried, Shreveport, La., is general manager.

**Anniston, Ala.—Hotel.**—W. D. Zinn is arranging to let early contract for construction of his proposed hotel. Plans call for five-story building 120x130 feet, containing every modern convenience.

**Ardmore, I. T.—Depot.**—St. Louis & San Francisco Railroad will build depot. B. L. Winchell of St. Louis, Mo., is general manager.

**Atlanta, Ga.—Church.**—Sacred Heart Church will expend about \$15,000 to enlarge and improve its edifice.

**Baltimore, Md.—Bank Building.**—Dime Savings Bank, 40 West Lexington street, will expend about \$800 to remodel four-story building into a banking office building.

**Baltimore, Md.—Bank Building.**—National Howard Bank has let contract to John Waters for construction of its proposed bank building.

**Baltimore, Md.—Synagogue.**—Shearith Israel Congregation has let contract to B. F. Bennett for construction of \$25,000 synagogue after plans by Lewis Levy.

**Baltimore, Md.—Armory.**—Wyatt & Noltling will prepare plans and specifications for armory building; \$50,000 is available for land and building. Lieut. R. C. Stewart, Maryland National Guard, 207 North Calvert street, can give information.

**Beaufort, N. C.—Hotel.**—G. D. Potter and others have incorporated Oceanic Hotel Co., with capital of \$50,000.

**Bedford City, Va.—Home Building.**—J. M. B. Lewis of Lynchburg, Va., is preparing plans and specifications for remodeling building at a cost of \$8000.

**Benton, Ark.—Courthouse.**—John S. Odom of Little Rock has contract at \$31,000 for construction of courthouse.

**Brenham, Texas—City Hall.**—Davy & Schott of Kerrville, Texas, have contract at \$13,155 to construct City Hall after plans by O. A. Watson of Austin.

**Calcas, Ala.—Courthouse and Jail.**—County will build courthouse and jail, and W. Chamberlin & Co. of Birmingham, Ala., will prepare plans and specifications. Date of opening bids to be announced later.

**Charlestown, W. Va.—Hotel.**—Palbaum Bros. will erect a hotel.

**Chattanooga, Tenn.—Warehouses.**—W. G. Downing of Atlanta, Ga., is architect in charge of construction of Chattanooga Transfer Co.'s proposed buildings mentioned last week.

**Dallas, Texas—Implement Warehouse.**—Texas-Moline Plow Co. will erect warehouse, of brick and stone, eight stories high, to cost \$30,000.

**Denton, Md.—Bank Building.**—Denton National Bank has accepted plans by F. E. & H. R. Davis of Baltimore for construction of \$17,000 office building.

**El Paso, Texas—Hotel, etc.**—E. Kohlburg has received plans and specifications for his proposed hotel, store and business building, to be four stories high, 100x110x160 feet.

**Estherwood, La.—Church.**—A. P. McNeil of Rayne, La., has prepared plans for construction of church building.

**Galveston, Texas—Quarantine Station.**—Geo. R. Tabor, State health officer, Austin, Texas, will open bids August 26 for building iron-frame screw-pilings quarantine station, also for the iron work required, etc. Plans and specifications on view with Tabor, also at Quarantine Station, Galveston, and office of Dodson & Scott, Waco, Texas.

**Huntsville, Ala.—Business Block.**—Hutchens & Murdock will erect brick business block.

**Indianola, Miss.—Bank Building.**—Bank of Indianola, A. F. Gardner, president, has let contract to D. F. Forrest for construction of building.

**Indianola, Miss.—Bank Building.**—Bank of Indianola has let contract for bank building lately reported. J. F. Barnes & Co. of Jackson, Miss., are architects in charge and contractors.\*

**Jacksonville, Fla.—Residence.**—J. E. Cohen

will build dwelling 55x90 feet, colonial style of architecture, etc.

**Kansas City, Mo.—Clubhouse.**—Manufacturers' Association will erect clubhouse to cost from \$50,000 to \$75,000. R. B. Teachenore is chairman of committee.

**Lafollette, Tenn.—School.**—L. W. Searles, president of board of education, will open bids August 11 for construction of school-house after plans on file at his office and that of the architects, W. Chamberlin & Co., of Birmingham, Ala.

**Louisville, Ky.—Residences.**—J. J. Gaffney has made plans for residence for Dr. G. H. Hendon, and for E. A. Richter.

**Louisville, Ky.—Dwelling.**—Oscar Fenley will build \$15,000 dwelling after plans by D. X. Murphy.

**Lynchburg, Va.—Warehouse.**—Barker-Jennings Hardware Co. will build a warehouse six stories high, 102x264 feet, to cost about \$50,000.

**Memphis, Tenn.—Freight Depot.**—Southern Railway will expend \$20,000 to enlarge and improve its freight depot. F. S. Gannon, Washington, D. C., is general manager.

**Milton, Ky.—Bank Building.**—Banking company of which J. H. Calvert is president will erect office building.

**Norfolk, Va.—Clubhouse.**—Virginia Club will erect a new home to cost probably \$100,000. K. M. Murchison, Jr., of New York has submitted preliminary plans for seven-story building on 34x100-foot lot. Caldwell Hardy is chairman of building committee.

**Owensboro, Ky.—Warehouse.**—American Tobacco Co. will build warehouse. Plans have been prepared by J. B. Hutchings of Louisville, Ky.

**Petros, Tenn.—Miners' Houses.**—Crooked Fork Coal & Coke Co. asks bids on erection of about thirty miners' houses.

**Pratt City, Ala.—Hall Building.**—Knights of Honor, A. J. Prince, chairman, propose erecting a \$1000 hall.

**Rayne, La.—Church.**—A. P. McNeil has prepared plans for construction of church building.

**Relay, Md.—Hotel.**—James A. Bealmeur will build hotel three stories high, 50x70 feet, forty bedrooms, etc., after plans by Chas. E. Cassell of Baltimore.

**Richmond, Va.—Amphitheater.**—Richmond Horse Show Association, J. E. Anderson, president, has let contract to Fritz Sidding for construction of amphitheater to cost about \$20,000.

**Sherman, Texas—School.**—City will erect school building, for which \$20,000 is available. Structure will be two stories high, to have sixteen classrooms, hot-air heating plant, lavatories, schoolroom equipment, etc. Plans will be received until August 1. Address Wm. Shelton, mayor.

**Sparta, Tenn.—Opera-house.**—W. Chamberlin & Co. of Birmingham, Ala., will prepare plans and specifications for opera-house to be built at Sparta.

**Wheeling, W. Va.—Roundhouse.**—Wheeling & Lake Erie Railroad will build roundhouse with capacity for sixteen to twenty locomotives. It is said that Wilson & Son are receiving bids for the construction.

#### RAILROAD CONSTRUCTION.

##### Railways.

**Alexandria, Va.—The Alexandria & Little Falls Railroad Co.** has been incorporated by W. W. Douglas, Montgomery Hunter, W. E. Welch and others to build an electric railway from Alexandria to the Little Falls of the Potomac. The Great Falls & Old Dominion Railway is also chartered.

**Athens, Ga.—It is proposed to build a railroad from Five Forks to Danielsville.** Col. James M. Smith, president of the Smithsonia & Dunlap Railroad, Smithsonia, Ga., is interested.

**Austin, Texas.—It is announced that the International & Great Northern Railway has purchased the Austin Dam & Suburban Railroad, about five miles long; Leroy Trice, general manager, Palestine, Texas.**

**Autaugaville, Ala.—The Autaugaville Railroad Co.** has been chartered to build a line six miles long from a point near Booth Station or Prattville, on the Mobile & Ohio Railroad, to Autaugaville. The officers of the company are: President, S. M. Dinkins of Montgomery, Ala.; vice-president, M. M. Smith of Autaugaville; secretary, R. A. Chapman of Montgomery; treasurer, Mims Howard of Autaugaville.

**Bexley, Miss.—Construction is now under way on the Diamond Lumber Co.'s railroad.** John O. Gresham is president.

**Birmingham, Ala.—Mr. J. P. Hornaday, banker, of Cincinnati, Ohio, writes from Bir-**

irmingham to the Manufacturers' Record, saying: "I have contracted with the Birmingham & Steel Cities Railway & Power Co. to finance the road and to take exclusive charge of their proposition. Responsible financial people have agreed to take bonds of road. Construction will commence within thirty days. The road is to be forty miles of standard construction. It will cost about \$800,000."

Brunswick, Ga.—It is reported that the Brunswick & Birmingham Railroad has bought the Tifton & Northeastern Railroad, and that the purchase of the Ocella & Worth Railroad is confirmed. An extension will be built, it is reported, to connect; J. A. McDuffie, general manager, Brunswick, Ga. A dispatch from Tifton says that officials of the T. & N. deny that it has been sold.

Chattanooga, Tenn.—The Chattanooga & Memphis Railroad, chartered last year, has, it is reported, secured rights of way in Chattanooga.

Chattanooga, Tenn.—It is reported that the Central of Georgia Railway and the Western & Atlantic Railway will build an extension to the new army post; T. D. Kline, general superintendent Central of Georgia, Savannah, Ga.; J. L. McCollum, superintendent Western & Atlantic, Atlanta, Ga.

Chihuahua, Mexico.—It is reported that the San Jose Railroad will build an extension to Parral; E. S. Safford, chief engineer, Juarez, Mexico.

Cheburne, Texas.—G. A. Human and other engineers are surveying a line for a railroad to Fort Worth.

Elkton, Md.—The Kent & Cecil Light, Power & Railway Co. has elected officers as follows: President, Edwin R. Cochran, Jr., Wilmington, Del.; vice-president and secretary, Wilmer Emory, Baltimore; treasurer, Henry M. McCullough, Elkton, Md. Mr. McCullough is counsel for the road in Cecil county, while John D. Urie is counsel in Kent county. The company is to build a line of railroad from Tolchester and Rock Hall, on Chesapeake bay in Kent county, to Chestertown, and thence to Elkton and the Delaware State line. Construction between Chestertown and the bay is expected to begin in about a month.

Emmence, Ky.—J. C. Helburn writes to the Manufacturers' Record that he has secured a franchise for a four-mile street railway between Emmence and Newcastles.

Fairfield, Texas.—It is reported that the International & Great Northern Railroad will build an extension to Fairfield, and thence to Corsicana; Leroy Trice, general manager, Palestine, Texas.

Fort Worth, Texas.—It is reported that the Chicago, Rock Island & Texas Railway will ask for bids by August 10 for the proposed construction between Fort Worth and Dallas; S. B. Hovey, general superintendent, Fort Worth.

Fulton, Ky.—Engineers for the Illinois Central Railroad are surveying for new sidings; J. T. Harahan, second vice-president, Chicago.

Grand Rivers, Ky.—Concerning the report that the Hillman Land & Iron Co. is building a railroad to its coal mines, a letter from that corporation to the Manufacturers' Record says: "The company has been contemplating the building of said road, but as yet no work has commenced."

Gulfport, Miss.—Willis W. Vall, chief engineer of the Gulf & Ship Island Railroad, writes to the Manufacturers' Record saying that the company will build probably twenty miles of siding for passing tracks as spurs to various industrial establishments, using old rail that is being replaced with 75-pound rail, A. S. C. E. section. A small yard will be put in near Hattiesburg, Miss. The whole line is being ballasted with gravel, cuts are being widened to twenty-three feet and fills to eighteen feet.

Guthrie, Okla.—The incorporators of the Cherryvale, Oklahoma & Texas Railway Co., recently chartered, are G. E. Wade and Geo. A. Masters of Perry, Okla.; S. M. Porter of Caney, Kan., and T. H. Sanford and A. W. Shults of Independence, Kan.; principal offices at Perry and Independence.

Hancock, Md.—A party of engineers under D. J. Scott, said to be working for the Baltimore & Ohio Railroad, report that the company proposes building a connection to the Pennsylvania Railroad at Everett, Pa.; J. M. Graham, chief engineer, Baltimore, Md.

Houston, Texas.—It is reported that the Velasco Terminal Railroad will be extended from Anchor toward Houston; E. L. Burke, general manager, Velasco, Texas.

Knoxville, Tenn.—It is reported that the contract for ten miles of the proposed Knoxville, Kimberlin Heights & Sevierville Electric Railway will be let immediately; E. N. Harris, engineer, Knoxville.

Knoxville, Tenn.—It is reported that W. H. Carpenter and others of Coudersport, Pa., who own valuable timber lands in Monroe county, have arranged with the Southern Railway for building a branch twenty-five miles long from Maryville.

Knoxville, Tenn.—Rights of way are being secured in Hawkins county, it is reported, for the proposed Tate Spring, Rogersville & Gate City Electric Railway, which is projected by W. E. Goffe.

Knoxville, Tenn.—It is reported that Otto Kittel of New York, who owns the Herbert Domain in Bledsoe county, has offered a premium for every mile of railroad built on his property, which includes valuable timber, mineral and farm land. L. S. Widney of Knoxville is now in the Crossville section seeking a branch road to the Latanna coal mines.

Lehigh, I. T.—The Choctaw Construction Co. has been organized to build the railway of the Lehigh Traction Co. The Laufketter-Bendit Mercantile Engineering Co., 310 Olive street, St. Louis, is the consulting engineer, and will prepare plans and specifications. They will soon be in the market for about twenty miles of rails.

Marianna, Ark.—Rights of way have been secured in Lee county for the proposed Brinkley & Marianna Railroad. It will be about thirty-five miles long. Col. J. M. Daggett is among those interested.

Marianna, Ark.—It is reported that the St. Louis, Iron Mountain & Southern Railroad will build an extension from Marianna to Trippe Junction, near Arkansas City, a distance of ninety-two miles, to make a direct line from St. Louis to New Orleans; Russell Harding, third vice-president and general manager, St. Louis, Mo.

Marianna, Ark.—Mr. B. Miller, president of the L'Anguille Lumber Co., writes to the Manufacturers' Record saying that the L'Anguille River Railway Co. is to build a spur track from the St. Louis, Iron Mountain & Southern Railroad to the plants of the L'Anguille Lumber Co. and the Indiana & Arkansas Lumber & Manufacturing Co. There will be about two miles of track, including switches, and it may lead to the building of a timber road in the direction of Memphis.

Memphis, Tenn.—The legislative council has granted the petition of the Illinois Central Railroad for extending its franchises. A number of improvements are projected; J. T. Harahan, vice-president, Chicago, Ill.

Memphis, Tenn.—The Union Railway Co. is to issue \$1,000,000 of bonds to build eight miles of railroad projected around Memphis; H. L. Brinkley, president.

Memphis, Tenn.—The St. Louis & San Francisco Railroad is laying twelve miles of new steel rail south of Amory; H. M. Pickinger, division superintendent, Memphis, Tenn.

Memphis, Tenn.—It is reported that the Louisville & Nashville Railroad will spend several thousand dollars in extending its yard facilities at Memphis; George E. Evans, general manager, Louisville, Ky.

Mexico, Mex.—H. R. Nickerson, vice-president and general manager of the Mexican Central Railway, confirms the report that the company is making a survey towards Texas. Thus far the engineers have run a line from Paredon, on the Monterey division, as far as Lampazos, in the State of Nueva Leon, about seventy miles from the Rio Grande.

Mexico, Mex.—A. J. Peyton & Co. will, it is reported, reorganize the Morelia & Toluca Railway project. The line will run from La Piedra, on the Mexican Central, via Morelia and Toluca to Arrio, 150 miles.

Mexico, Mex.—It is reported that an extension of the Cananea Railway has been positively decided; W. C. Greene, president, 375 Broadway, New York.

Mexico, Mex.—H. R. Nickerson, vice-president and general manager of the Mexican Central Railway, writes to the Manufacturers' Record, saying: "The company has made no arrangements for building a branch forty miles in length from the Monterey division to Ocampo, and so far as I know the matter has not even been considered."

Milwaukee, Wis.—President F. N. Finney of the Missouri, Kansas & Oklahoma Railroad Co. writes to the Manufacturers' Record that the company is just beginning the location of a line between Coalgate, I. T., and Oklahoma City, O. T.

New Berne, N. C.—M. D. W. Stevenson, W. W. Clark, H. R. Bryan, Jr., and Owen H. Gulon are reported interested in the proposed Pamlico, Oriental & Western Railroad, to build from Bayboro to New Berne.

New Iberia, La.—John A. McIlhenny and F. F. Myles have been granted a franchise

to build an electric railway through New Iberia. The road will run to Morgan City. Mr. McIlhenny has also secured a franchise through St. Martinville.

New Orleans, La.—George Hanson, superintendent of bridges and buildings Texas & Pacific Railway, is reported to have resigned to undertake a construction contract for the Missouri, Kansas & Texas Railway in the Indian Territory.

New Orleans, La.—It is reported that the contract to grade the Lacassine extension of the Louisiana Western Railway Co., twenty-five miles long, from a point near Lake Charles has been awarded to S. A. Robertson of Houston, Texas; Thornwell Fay, general superintendent, New Orleans.

Newport News, Va.—It is reported that the Hampton Roads Railway & Electric Co. will soon begin constructing its line through to Buckroe Beach.

Newport News, Va.—W. J. Nelms, president of the Hampton Roads Railway & Electric Co., writes to the Manufacturers' Record that the line between Hampton and Buckroe Beach has been about half finished.

Paragould, Ark.—It is reported that the Paragould & Memphis Railway will build a line from Paragould to Osceola, about forty miles.

Pensacola, Fla.—The Louisville & Nashville Railroad will, it is reported, build a branch from Opp to Florida, Ala., where the Jackson Lumber Co. will build a large mill; R. Montfort, chief engineer, Louisville, Ky. It is also reported that the Central of Georgia will build from Sellersville to Florida; H. M. Steele, chief engineer, Savannah, Ga.

Pine Bluff, Ark.—Rights of way are being secured for the extension of the Pine Bluff & Western Railway to Benton; W. T. Radford, superintendent and chief engineer; office at Pine Bluff.

Port Gibson, Miss.—The Board of Trade has appointed a committee composed of G. W. Wheelless, A. K. Shaefer, T. C. Englesing and F. A. Paisley to consider a proposition to build a railroad from Port Gibson to Harts Landing, twelve miles.

Raleigh, N. C.—The North Carolina Central Railroad Co., capital \$2,000,000, has received its charter to build a line from Fayetteville to Concord, more than 100 miles. The incorporators are Edward W. Shredd, Providence, R. I.; William T. Pratt, New York; J. Herbert Shredd, Providence; F. W. Srebert, Waterbury, Conn.; A. H. Slocombe, Fayetteville; M. H. Caldwell, Concord, and J. L. Roper, Lumberton.

Rockville, Md.—The Kensington & Chevy Chase Electric Railway will, it is reported, be extended to Wheaton. George E. Emmons of Washington recently purchased the line.

Searbro, W. Va.—President S. Dixon of the White Oak Fuel Co. writes to the Manufacturers' Record that the company is grading about seven miles of railroad to reach coal lands on White Oak and Arbuckle creeks, in Fayette county, to be developed by the Stuart Colliery Co., organized by the former corporation. The line will connect with the White Oak branch of the Chesapeake & Ohio Railway.

Sherman, Texas.—T. La Hache, one of the incorporators of the Acme, Northern & Red River Railway, is reported as stating that the right of way from Acme to the river has been secured.

Stamps, Ark.—The Occender Dirt & Dump Co., it is reported, has secured the contract to begin grading on the extension of the Louisiana & Arkansas Railroad from Stamps to Hope, twenty miles; William Buchanan, president and general manager, Texarkana, Ark.

Staunton, Va.—The Chesapeake & Western Railroad is making a preliminary survey to Durbin; A. S. Weisiger, superintendent, Harrisonburg, W. Va.

St. Louis, Mo.—Mr. F. H. Britton, president of the St. Louis Southwestern Railway Co. of Texas, writes to the Manufacturers' Record, saying: "We have made arrangements to relay the line between Fort Worth and Carrollton, Texas, with 70-pound rail in place of 56-pound rail."

St. Louis, Mo.—It is reported that the Illinois Southern Railway, which extends from Salem to Chester, Ill., eighty-seven miles, will build an extension to Bismarck, Mo.; E. A. Burrill, superintendent, Sparta, Ill. Mr. Burrill writes to the Manufacturers' Record that the Southern Missouri Railway was incorporated to build a line forty-four miles long from Little Rock Landing, Mo., to Bismarck, Mo. Rails are now being laid. It connects with the Iron Mountain and the Cotton Belt at Bismarck. Little Rock Landing is across the Mississippi from Chester, Ill.

St. Louis, Mo.—The Ingleside, Jennings & Ben Avis Rapid Transit Co. has applied at

Clayton for a franchise for an electric railroad from the city limits at McLaren avenue to Jennings and Ferguson. Ben Blewett, Henry W. Sebastian and Robert L. McLaren filed the petition.

Talladega, Ala.—The Donelson Construction Co. writes from headquarters at Birmingham, Ala., to the Manufacturers' Record that it is moving an outfit to Talladega to begin immediate construction on the Eastern Railway of Alabama, ten miles long. The Louisville & Nashville Railroad is behind the proposition; R. Montfort, Louisville, Ky., chief engineer.

Van Vleck, Texas.—Tracklaying has begun on the Southern Pacific extension to Bay City. The Hawkinsville extension is completed about five miles; W. G. Van Vleck, general manager, Houston, Texas.

Warren, Pa.—Mr. C. W. Stone writes to the Manufacturers' Record saying that the Cumberland Railroad Co. is to reach mines to be opened by the Cumberland Coal Co. in the southern part of Knox county, Kentucky.

Washington, D. C.—The Washington, Baltimore & Annapolis Railway Co. has been granted a franchise to lay a track on Northwest street, in the city of Annapolis, Md., to a terminus at Church Circle, and a survey has begun. Grading is in progress on the line at Shipley, about seven miles from Baltimore; James Christy, Jr., general manager, Washington, D. C.

Winnboro, S. C.—The Winnboro & Rock City Electric Railway Co. has been chartered by Thomas H. Ketchin, W. R. Rabb, T. K. Elliott, J. D. McCarley, J. O. Boag, J. E. McDonald and L. E. Owens to build an electric railroad from Winnboro to granite quarries in Fairfield county. Mr. McDonald writes to the Manufacturers' Record that the line will extend from Winnboro to Rock City, six miles, and the grading will be light.

#### Street Railways.

Chattanooga, Tenn.—The Chattanooga Electric Railway is to build a loop track in Highland Park.

Chattanooga, Tenn.—The Chattanooga Electric Railway Co. is to begin work immediately, it is reported, on the proposed St. Elmo line.

Jacksonville, Fla.—R. R. Robinson, president of the North Jacksonville Street Railway, Town & Improvement Co., writes to the Manufacturers' Record that the company proposes to build an electric railway from Jacksonville, four and one-half miles long, to Monterie Springs.

Kansas City, Mo.—The Metropolitan Street Railway Co. has been granted a new franchise.

St. Joseph, Mo.—It is reported that the St. Joseph Railway Co. will soon make a number of important improvements. E. W. Clark and others of Philadelphia are interested.

Texarkana, Texas.—E. J. Spencer and T. W. Crouch of St. Louis have purchased the Texarkana Street Railway, and will convert it into a cable line.

#### Machinery, Proposals and Supplies Wanted.

**Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.**

**Boiler.**—See "Drying Equipment."

**Boiler.**—Charleston Milling & Produce Co., Charleston, W. Va., will need boiler.

**Boiler and Engine.**—See "Woodworking Machinery," mentioning J. Elliott.

**Boiler and Engine.**—Mountain City Mill Co., Fairmont, W. Va., wants boiler and gin engine.

**Boilers and Engine.**—O. E. Emerson, Georgetown, S. C., wants locomotive or marine boiler 100 to 125 horse-power, also plain engine 75 to 80 horse-power, and an upright boiler 60 to 100 horse-power; second-hand will do.

**Boilers and Engines.**—See "Woodworking Machinery."

**Box-factory Machinery.**—Alexander J. Feild, 501 Tucker Building, Raleigh, N. C.,



wants information and prices on box-factory equipment, particularly nailing machines.

**Brick Machinery.**—Poplarville Realty & Manufacturing Co., W. A. Gill, Jr., secretary, Poplarville, Miss., will need brick machinery, handle machinery and supplies for telephone exchange.

**Brass Balls.**—Star Brass Works, 67 South Canal street, Chicago, wants addresses of manufacturers of brass balls in sizes from three-eighths inch to one and one-quarter inches.

**Bridge.**—St. Augustine, South Beach Railway & Bridge Co., E. E. Boyse, receiver, St. Augustine, Fla., wants second-hand iron swing drawbridge, about 175 feet long, 20 to 25 feet wide.

**Builders' Supplies.**—R. A. Figgatt & Co., Bluefield, W. Va., will need general line of builders' supplies.

**Building Supplies.**—A. J. Baldwin & Co., Dawson, Ga., want sheetings and floor felt.

**Castings Manufacture.**—See "Manufacturers."

**Chair Factory.**—See "Woodworking Machinery," mentioning J. Elliott.

**Dentistry Supplies.**—S. B. Ward, Bellevue, Va., wants Ionic caps, either in wood or composition.

**Drying Equipment.**—D. T. Elane, Farmville, Va., wants estimates on 40-horse-power vertical boiler and new fan process for drying tobacco.

**Electrical Machinery.**—Mountain City Mill Co. of Fairmont, W. Va., wants dynamo for lighting.

**Electric-power Plant.**—See "Railway Equipment," mentioning Laufketter-Bendit Company.

**Elevators.**—Chattanooga Transfer Co., Chattanooga, Tenn., wants two elevators for warehouse.

**Engine.**—W. P. Flowers & Son, Falkville, Ala., want gasoline engine, also blacksmithing and woodworking tools.

**Excelsior Machinery.**—Sparta Excelsior Co., Sparta, Tenn., wants excelsior machinery.

**Feed Mill.**—See "Flour Mill."

**Flour Mill.**—Mountain City Mill Co., Fairmont, W. Va., wants general mill machinery.

**Flour Mill.**—W. J. Myers & Bro., Troy, Tenn., will want next fall bids for flour-mill machinery.

**Flour Mill.**—W. N. Stice, Dawson Springs, Ky., wants engine, boiler and complete flouring and feed equipment, sixty barrels of flour capacity.

**Flouring Machinery.**—Charleston Milling & Produce Co., Charleston, W. Va., will need new sifter or gyrating system for flouring and other machinery.

**Foundry Equipment.**—Gustafson Bros. Manufacturing Co., Chattanooga, Tenn., wants double-end axle lathe for two-inch axles (mining car), double-end axle lathe for four-inch axles (inclined car), boring and facing mill for car wheels, pulleys, cylinders, etc., turret lathe, each for finishing one, two and four inches.

**General Machinery, etc.**—Philadelphia Branch, I. B. Williams & Sons, 722 Arch street, Philadelphia, invites correspondence requesting agency for mill, mine, railroad and engineers' supplies, power-transmission machinery and other equipment. Catalogues are invited.

**Handle Machinery.**—See "Brick Machinery."

**Heating Plant.**—Calvin H. Long, Snow Hill, Md., wants steam-heating equipment for 15-room hotel; new or second-hand machinery.

**Heating Plant.**—W. L. Campbell, Wilson, N. C., wants steam-heating plant for hotel of sixty-five rooms.

**Hydraulic Machinery.**—American Tobacco Co., Owensboro, Ky., will need small amount of hydraulic machinery.

**Ice Plant.**—Poplarville Realty & Manufacturing Co., W. A. Gill, Jr., secretary, Poplarville, Miss., will need ice plant.

**Irrigation System.**—See "Pumping Plant."

**Knitting Machinery.**—Elizabeth City Hosiery Co., Elizabeth City, N. C., will want ribbers for making hosiery tops.

**Machine Shops.**—See "Woodworking Tools."

**Machine Shops.**—Austin Electric Railway Co., Austin, Texas, will need complete equipment for railway shops.

**Manufacturers.**—Wallace Manufacturing Co., Madisonville, Tenn., wants bids on manufacture of small novelty to be made partly of wood and partly of rolled steel, or entirely of malleable or steel castings.

**Mining Equipment.**—Stuart Colliery Co.,

Samuel Dixon, president, Scarbro, W. Va., will buy hoisting machinery, boilers, fans, etc., for two shafts of 1500 tons daily each.

**Nailing Machines.**—See "Box-factory Equipment."

**Office Fixtures.**—Bank of Indianola, Indianola, Miss., wants bank furnishings and fixtures.

**Oil Mill.**—C. L. Farnham, San Juan, Porto Rico, wants prices on castor-oil equipment.

**Oil Refinery.**—Bankers' Trust & Investment Co., 159 La Salle street, Chicago, will probably contract for construction of oil refinery, oil pipe lines, tanks and tank cars.

**Paint Machinery.**—J. T. Roberts, Montgomery, Ala., wants information on paint manufacture and estimates on cost of machinery.

**Pulverizing Machinery.**—Barataria Canning Co., Biloxi, Miss., wants crushers, grinders, pulverizers, dryers, elevators, 75-horse-power engine, etc. (except boilers), to pulverize oyster shells, and machinery to utilize general sea products.

**Pumping Plant.**—Dudley D. Baker, Box 45, Seguin, Texas, will buy plant to irrigate 175 acres; will use water-power, installing undershot wheel, pump and about 1800 feet of pipe; wants a discharge of 1000 gallons per minute to an elevation of sixty-five feet.

**Railway Equipment.**—See "Oil Refinery."

**Railway Equipment.**—Laufketter-Bendit M. E. Co., 810 Olive street, St. Louis, Mo., will soon want about twenty miles of rails and power-house equipment, etc.

**Railway Equipment.**—A. C. Box 906, Birmingham, Ala., wants four-wheel connected saddle-tank standard-gauge coke-oven dinky, preferably 6x10 or 7x12, in first-class order.

**Refining Machinery.**—See "Oil Refinery."

**Retorts.**—See "Steel Work."

**Speed Recorders.**—L. Everett Bixby, Quito, Ecuador, wants catalogues and prices on power machinery speed recorders (especially the Moscrop recorder).

**Steel Work.**—Wilcox-Ives Oil Co., 128 Bay street, east, Savannah, Ga., wants three or four iron or steel cells four to six feet in diameter, suitable for retort. State condition, size and terms.

**Steel Work.**—Thomas M. Swift, president of city council, Elberton, Ga., wants estimates on construction of 100 feet of steel flume, six feet in diameter at one end and reducing to five feet at the other, with a valve at the smaller end, to be in lengths of twenty feet each, to be of one-quarter-inch steel. Give full particulars.

**Stoppers.**—Columbia Paper Co., 1806 Main street, Columbia, S. C., wants addresses of manufacturers or importers of cork stoppers for bottles.

**Store Fixtures.**—Beaumont Grocery Co. of Beaumont, Texas, wants grocery fixtures.

**Store Fixtures, etc.**—A. J. McCaslin & Co., Grenada, Miss., will need store fixtures, wall cases, soda fountain, etc.

**Syrup Machinery.**—John G. Steffes Company, Ruskin, Ga., will want machinery for manufacturing syrup from sugar-cane.

**Tanks.**—See "Oil Refinery."

**Telephone Equipment.**—See "Brick Machinery."

**Telephone Equipment.**—St. Matthews Telephone Co., St. Matthews, S. C., wants wire, brackets, insulators, plus, etc.

**Telephone Equipment.**—W. C. Newman, Ellerson, Va., wants estimates and price-lists on telephone equipment, etc.

**Textile Machinery.**—L. Everett Bixby, Quito, Ecuador, wants prices and catalogues on rope-making machinery.

**Water-wheel.**—See "Pumping Plant."

**Water-works.**—Springdale water-works commission, C. J. Chapman, secretary, Springdale, Ark., will open bids August 1 for construction of water-works; plans and specifications on hand.

**Well-drilling.**—Crooked Fork Coal & Coke Co., Petros, Tenn., wants to let contract for drilling several shallow-water wells 100 to 200 feet.

**Woodenware Machinery.**—W. A. Berry, Branchville, S. C., wants machinery to manufacture buckets, tubs, washboards and handles.

**Woodworking Machinery.**—See "Handle Machinery."

**Woodworking Machinery.**—See "Woodenware Machinery."

**Woodworking Machinery.**—H. Van S. Brown & Co., Louisville, Ky., want a lathe saw.

**Woodworking Machinery.**—J. A. Elliott, secretary Elliott Chair Co., Lexington, N. C., will want equipment for chair factory.

**Woodworking Tools.**—W. P. Flowers &

Son, Falkville, Ala., want woodworking tools and blacksmith outfit.

**Woodworking Machinery.**—Valley Woodworking Co., Morgantown, W. Va., will need woodworking machinery, engines, boilers, etc.

## TRADE NOTES.

**Sole Agent.**—The Bourne-Fuller Company, Cleveland, is sole agent for the "Byers" line of wrought-iron pipe for Cleveland.

**Sale Telephone System.**—Because the owner is retiring from business a telephone system with 500 subscribers is for sale by Coon Bros., Rantoul, Ill.

**Hosiery Mill for Sale.**—H. Brooks, Denison, Texas, offers for sale a complete hosiery mill, either outright or on interest to a competent superintendent. This plant has been in use less than one year.

**Mineral and Timber Land Sale.**—Messrs. B. A. Fesperman & Co., Rockwell, N. C., offer for sale twenty-five acres of best North Carolina granite and 125 acres of fine timber, all in one body and at reasonable prices.

**Good Location.**—Brinkley, Ark., has a Business Men's League. Frank Andrews is the secretary of this league, and will be glad to communicate with anyone wishing to locate in Brinkley. The town is said to be an especially good location for a cotton factory.

**Hicks Company's Sales.**—The Hicks Locomotive and Car Works, 277-285 Dearborn street, Chicago, continues to do a good business in second-hand and rebuilt railway equipment, having recently sold seventy-six flat cars, one logging and one freight engine to various parties.

**Fine Telephones.**—The Sumter Telephone Manufacturing Co., Sumter, S. C., was awarded highest honors, gold medals, on telephones, transmitters, receivers, switchboards and switchboard appliances at the South Carolina Interstate and West Indian Exposition in Charleston.

**Florida Timber for Sale.**—Forty-four thousand acres of desirable saw-mill timber in one body is for sale in Levy county, Florida. This is ready for sale in January 1, 1903, and has excellent rail and water transportation facilities. Address West & Co., Box 434, Savannah, Ga., for further particulars.

**Filters for England.**—The Burt Manufacturing Co., Akron, Ohio, reports that it has just filled an order from London, England, for twenty-eight Cross oil filters and 111 "Burt" exhaust heads. The shipment made one solid carload, and constituted orders taken by the company's London agency.

**Automatic Windows.**—The American Bank Note Co. is equipping its new building on Sanson street, Philadelphia, with patent automatic-closing metal windows purchased from the Smith-Warren Company, 33 Federal street, Boston. It is stated that sharp competition took place among window-makers over this order.

**City Water Works.**—Blakely, Ga., is to have a system of city water-works and electric lights. Until noon August 13, 1902, bids accompanied by certified checks for 5 per cent. will be received by Moore & McCrary, engineers, Atlanta, Ga. Plans and specifications will be on file after August 1 at the clerk's office in Blakely.

**Mexican Water-Works.**—The city of Monterey, Mexico, is inviting bids on a system of public water-works and drainage. These bids, the right to refuse any or all of which is reserved, must be in the hands of Secretario de Gobierno, Monterey, Mexico, on or before August 15, 1902, to whom, for full particulars of the conditions under which this work is to be placed, letters should be addressed.

**Good Southern Business.**—The Eureka Supply Co., Chattanooga, Tenn., is doing a fine business. Because of its Southern location, careful attention to business details and rapid shipments it is fast forging ahead. Two very large contracts were recently secured—one in El Paso, the other in Denning, New Mexico. These orders were won, it is said, in the face of competition from some of the largest concerns in the United States.

**Rate War.**—A rate war is raging between the lake and rail lines operating between Detroit and Buffalo. The railroads, it seems, started the fight by week's end excursions, allowing first-class privileges on second-class tickets. The boat line, operated by the Detroit & Cleveland Navigation Co., is prepared to finish it, and is selling first-class tickets at \$2.50 for the distance, 200 miles,

and will reduce another dollar if the roads accept the challenge.

**Good Business.**—The list of recent orders and installations taken and put in by the Phoenix Iron Works Co., Meadville, Pa., is a large one. Among these were shipments of engines of various sizes and types to the following parties: Farmers' Deposit National Bank of Pittsburg; Penn Iron & Coal Co., Canal Dover, Ohio; Maritime Building, 610 Bridge street, New York; Charles S. Sieger, San Vincente, Mexico; Heyden Chemical Building, Garfield, N. J., and a score of others.

**Incorporation.**—The Warp Twisting-In Machine Co., with a capital stock of \$2,500,000, was incorporated in New Jersey July 18. This capital stock consists of \$2,000,000 common and \$500,000 preferred. The incorporators are Clarence F. Walker, Elmer H. Geran, Adrien D. Adriance and William C. Horn. The temporary address is 248 Washington street, Jersey City. This company has patented a machine which is designed to handle broken threads in a cotton mill by a very simple and effective device, instead of by hand, as at present.

**Removal.**—On account of largely-increased business, the Vapor Heating Co., Philadelphia, owner of "Broomell's" vapor system of heating, has moved to 917 Arch street. The vapor system is becoming very popular all over the country. In the South many people and companies are using it. Among these are the Preparatory Branch of the University of West Virginia, Keyser; the McDowell county courthouse and jail at Welch, W. Va.; the Henry Clay Inn at Ashland; the residences of Mr. George Guvernator and Mr. W. B. Meredith in Richmond, Va., and the Hotel Hamilton at Hagerstown, Md.

**A Popular Paint.**—Southern tobacco manufacturers are showing by their works their faith in the "Dura Asphalta" elastic roof paint of the Richmond Supply Co. of Richmond, Va. Among the well-known firms and companies which have recently painted the roofs of their factories with this material are the T. C. Williams Co. and the R. A. Patterson Tobacco Co., Richmond, Va.; William Cameron & Bro., MacLin & Son, Oaks Warehouse Co., J. J. Persival & Son, warehousemen, and the American Sugar Co., Petersburg, Va.; the Continental Tobacco Co. and others of Danville. The Richmond Supply Co., which is prepared to do large work of this character, is to begin this week to apply cold-water paint to the interior of the American Sugar Co.'s factory at Greensboro. The company has recently received an order for its elastic roof paint from Odessa, Russia.

**Ball Engines.**—The Ball engine continues to enter new plants and make new friends. In connection with Westinghouse generators and dynamos two tandem compound engines have just been installed—one in the United States Steel Building, Duluth, Minn., the other in the Deaf and Dumb Asylum of Austin, Texas. Stearns & Foster, cotton manufacturers, Lockland, Cincinnati, are installing an electric plant to consist of a Bullock generator, direct-connected to a Ball engine. The West Virginia Reform School, Fetterman, W. Va., is installing an electric plant. The engine will be furnished by the Ball Engine Co., and the generator by the Westinghouse Electric & Manufacturing Co., Pittsburg. Sanger Bros' dry goods house at Waco, Texas, will have their own electric plant. The engines used for driving it will be Ball engines.

**Notes About the Westinghouse Company.**—The Westinghouse Electric & Manufacturing Co., Pittsburg, is doing and for some time past has done an exceedingly extensive business in electrical machinery. The quality of the Westinghouse goods is unexcelled by the product of any maker in any country, and the extensive sales are deserved. Among these the following deserve notice: Two 2000-kilowatt A. C. generators for the Central California Electric Co., Sacramento; a large number of induction motors for the Lunkensheimer Company's works in Cincinnati; one 150-kilowatt two-phase belted alternator for Jacob Miller, Sons & Co., Philadelphia; extensive electrical equipment for the Illinois Glass Co.; one 150-kilowatt D. C. generator, a 200-kilowatt two-phase alternator and a number of induction motors for the Industrial Works of Bay City, Mich., one of the largest establishments for the manufacture of railroad wrecking cranes in the world; two 375-kilowatt A. C. generators, one 400-kilowatt D. C. generator, a 400-kilowatt rotary converter and fifty induction motors for the Standard Steel Car Co., Pittsburg; one 800-kilowatt D. C. generator, two 125-light motor-driven are generators, and two

150-kilowatt motor-driven two-phase alternators for Jones & Laughlin, Ltd., Pittsburg, and two 100-kilowatt engine-type two-phase alternators with direct-connected exciters, complete with switchboards, for the Doylestown Electric Co., Doylestown, Pa.

**Babcock & Wilcox Boilers.**—The following quotation from the report of the committee appointed by the Lords Commissioners of the British Admiralty to consider certain questions respecting modern types of boilers for naval purposes will be of interest: "In the course of its investigations the committee has watched the Babcock & Wilcox boilers fitted to the steamship Martello of the Wilson Line, employed in the Atlantic trade between Hull, Boston and New York, and copies of the reports of its inspections have from time to time been forwarded to their Lordships. These inspections have taken place at the end of every round voyage for fourteen months, and the committee's opinion is that these boilers have stood the test of usage in the mercantile marine extremely well. The vessel has run about 91,000 miles since the boilers were put in, and has usually been less than a week in port at either end; the only repairs required have been those of the ordinary upkeep of any boiler, such as fire-bars, brickwork, etc., and only six tubes have required renewal. This opinion is strengthened by the inspections of boilers of the same type fitted in the Numidian, the Brenos Ayrean and the Turret Cape. In the case of the last-named vessel the boilers have been in use seven years, and cannot have been as well looked after as they would have been in the navy, and their condition when examined recently was satisfactory. The committee has also examined and tested boilers of the same type in H. M. S. Sheldrake, and find that, although they have been in use for four years, their condition is good and they have given little trouble. From the information which has been brought to the notice of the committee, it appears that water-tube boilers are being very little used in large ships belonging to the mercantile marine, and that their use in such ships is increasing very slowly. In the British mercantile marine the only type of water-tube boiler installed in ocean-going vessels is the Babcock & Wilcox, in some ships of the Wilson and the Petersen-Tate lines, and in three ships of the Allan Line; in these last, however, only one water-tube boiler is fitted in each vessel to assist the original cylindrical boilers. \* \* \* In the American navy many Babcock & Wilcox boilers are in use."

### TRADE LITERATURE.

**For the Miller.**—The July issue of Wolfprints, a monthly technical magazine, published by the Wolfprints Company, Chambersburg, Pa., and devoted to the interests of the milling fraternity, has been received. This magazine is readable and instructive.

**Boston & Maine Messenger.**—The July issue of the Boston & Maine Messenger, issued monthly by the passenger department of that road, has been received. The half-tone illustrations are pretty, the typographical work good, and the reading matter excellent.

**"Savogran."**—A very original mailing card has been received from the India Alkali Works, Boston, describing the above product, a fine soluble powder, said to be excellent for cleaning, to be odorless, and to have been in entirely satisfactory use for twenty-seven years.

**Brass and Copper.**—The latest catalogue of brass and copper issued by Merchant & Co., Inc., Philadelphia, is one of the most complete ever gotten out by this company, whose catalogues are always complete. Among the products listed therein are copper, brass, bronze, etc., worked into seamless and bronzed tubing, sheets, rolls, rods, wire, etc.

**Book of Testimonials.**—A little book containing hundreds of names, a partial list of users, and scores of letters of an exceedingly satisfactory nature from users of the ice and refrigerating machines made by that firm has been received from the A. H. Barber Manufacturing Co., 229 South Water street, Chicago. These letters are from satisfied customers.

**Good Roofing.**—"White Rock" stone-surface roofing, described in a neat little booklet sent out by its maker, Buchanan-Foster Company, 724 Drexel Building, Philadelphia, is said to be stormproof, acidproof and time-defying. It is cheap to buy, cheap to lay, and said to be economical at any price. "Eagle" brand, a two and three-ply roofing, is said to be unexcelled, and one of the heaviest and most satisfactory roofing preparations sold in America today.

## FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

### Review of the Baltimore Market.

Office Manufacturers' Record,  
Baltimore, Md., July 30.

In the Baltimore stock market during the past week further advances took place in the shares of the International Trust Co. under the influence of favorable reports as to its outlook. The common and preferred shares of the Alabama Consolidated Coal & Iron Co., in which the International is also interested, likewise advanced. Seaboard Air Line common and preferred stock scored a rise under the inspiration of the news that the large coal and railroad deal in the southwestern part of Virginia had been closed by the Union Trust Co. with interests friendly to the Seaboard. Shares of the Union Trust Co. also advanced rapidly as a result of this announcement. The stock and bonds of the Nashville Railway were without particular change, both remaining steady, but it must not be overlooked that Atlantic Coast Line common declined rapidly ten points after a positive denial was given the report that the company would acquire the Louisville & Nashville Railroad.

Cotton Duck issues advanced rapidly when it was officially announced that six months' interest would be paid on the income bonds of the Mount Vernon-Woodberry Cotton Duck Co. Six months' interest is also to be paid on the preferred shares of the United States Cotton Duck Co.

In the trading United Railways common sold at from 16 to 16½, and a small sale of the preferred was made at 34. The income bonds changed hands between 70½ and 70¾, and the 4 per cents at 97½ to 97¾. Light & Power preferred was stagnant, but the 4½ per cent. bonds sold at 86½. Consolidated Gas common moved between 69½ and 70, and the 6 per cent. bonds sold at 112. Seaboard common was dealt in between 27½ and 29; the preferred between 47½ and 48½. The 4 per cent. bonds were traded in between 86 and 86½, and the 5 per cents at 104 and 104½. Cotton Duck sold between 9 and 10½, the income bonds from 43½ to 49, and the 5s at 81½ to 83½; United States Cotton Duck at 15. G. B. S. Brewing common was dealt in between 17 and 18, the incomes between 43 and 44, while the scrip sold at 42½, and the 1sts at 53½ to 54.

International Trust advanced rapidly from 135 to 139½, from which there was some reaction. Union Trust advanced from 65 to 68½; Mercantile Trust sold at 165 and 166; Baltimore Trust at 312½; Continental at 215; Maryland Trust at 205; Fidelity & Deposit, 164 and 164½; United States Fidelity, 145½ to 146½; Maryland Casualty, 55 and 55½; Citizens' Bank sold at 32½; Bank of Baltimore at 126; Third National at 133½, and Union Bank at 119.

Other securities traded in were as follows: Alabama Consolidated Coal & Iron common at from 20 to 27; preferred, 85 to 87½. Atlantic Coast Line started at 168, rose to 170½, and reacted to 160. Atlantic Coast Line of Connecticut sold at 288½. Northern Central was dealt in at 124 and 125½; Citizens' Railway & Light of Newport News 5s at 99; Nashville Railway common at 4¾ and 5, and the 5 per cent. certificates at 72½ and 72¾; Nashville Street Railway 5s at 100; Columbia & Greenville 1sts at 119½; Georgia & Alabama consolidated 5s, 112½ and

112¾; Norfolk & Carolina 2ds, 120½; Anacostia & Potomac 5s, 99½ to 102; Georgia, Carolina & Northern 5s, 112 and 112½; Maryland & Pennsylvania common, 31; West Virginia 6s, 113½; City & Suburban 5s (D. C.), 100½ to 102½; Potomac Valley 5s, 118 and 119; Atlantic & Charlotte common, 168; South Bound 5s, 112½; Newport News & Old Point 5s, 100½; Georgia Southern & Florida 1st preferred, 100; the 5 per cent. bonds at 114½; Georgia Pacific 1sts, 125½, and Atlanta Street Railway 5s at 106.

### SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended  
July 30, 1902.

Railroad Stocks.	Par.	Bid.	Asked
Atlanta & Charlotte.....	100	165	...
Georgia Southern & Florida.....	100	48	...
Georgia Sou. & Fla. 1st Pref.....	100	99½	100½
Georgia Sou. & Fla. 2d Pref.....	100	83	85
United Railways & Elec. Co.....	50	16	16½
Seaboard Railway Common.....	100	27½	27½
Seaboard Railway Preferred.....	100	47½	48
Atlantic Coast Line of Conn.....	100	286	286

Bank Stocks.	Par.	Bid.	Asked
Citizens' National Bank.....	10	32	32½
Commercial & Far. Nat. Bank.....	100	135	140
First National Bank.....	100	155	...
German Bank.....	100	107	...
Manufacturers' National Bk.....	100	102½	106
National Bank of Baltimore.....	100	126	...
National Bank of Commerce.....	15	28	...
National Exchange Bank.....	100	193	194½
National Marine Bank.....	30	37	...
National Mechanics' Bank.....	10	31½	32½
National Union Bank of Md.....	100	119½	120
Second National Bank.....	100	190	...
Third National Bank.....	100	132	135

Fruit, Fidelity and Casualty Stocks.	Par.	Bid.	Asked
Baltimore Trust & Guarantee.....	100	312½	315
Colonial Trust.....	50	30	32
Continental Trust.....	100	213½	220
Fidelity & Deposit.....	50	164	164½
International Trust.....	100	137	138
Maryland Casualty.....	25	54½	56½
Maryland Trust.....	50	205	206
Mercantile Trust & Deposit.....	50	165	167
Union Trust.....	50	67	68½
U. S. Fidelity & Guaranty.....	100	146	148

Miscellaneous Stocks.	Par.	Bid.	Asked
G. B. & S. Brewing Co.....	100	17	17½
United Elec. L. & P. Pref.....	50	...	42
Cotton Duck Voting Trust.....	100	10½	10½
Consolidation Coal.....	100	80	82
Consolidated Gas.....	100	69½	70½
Atlantic Transport.....	100	265	275

Railroad Bonds.	Par.	Bid.	Asked
Atlanta & Charlotte 1st 7s, 1907.....	112½	...	...
Char. Col. & Aug. 2d 7s, 1910.....	110	...	...
Columbia & Greenville 1st 6s, 1916.....	119½	121	...
Georgia, Car. & North 1st 5s, 1929.....	118	121½	...
Georgia South. & Fla. 1st 5s, 1945.....	114½	115½	...
Raleigh & Augusta 1st 6s, 1926.....	125½	...	...
Seaboard & Roanoke 6s, 1916.....	107	...	...
Seaboard & Roanoke 5s, 1926.....	113½	114½	...
Southern Railway Con. 5s, 1994.....	120	...	...
Virginia Midland 2d 6s, 1911.....	115	...	...
Virginia Midland 3d 6s, 1916.....	120½	...	...
Virginia Midland 5th 5s, 1926.....	118	...	...
West. North Carolina Con. 5s, 1914.....	118	...	...
West Virginia Central 1st 6s, 1911.....	113	...	...
Wilmington, Col. & Aug. 6s, 1910.....	113½	114	...
Charleston City Railway 5s, 1923.....	105	...	...
Charleston Con. Electric 5s, 1999.....	93½	96	...
Knoxville Traction 1st 5s, 1928.....	100½	...	...
Newport News & Old Pt. 5s, 1938.....	109	110	...
United Railways 1st 4s, 1949.....	97½	97½	...
United Railways Inc. 4s, 1949.....	70½	70½	...
Seaboard 10-year 5s.....	86	86½	...
Lexington Railway 1st 5s.....	104	...	...
Georgia & Alabama Con. 5s.....	112½	113	...
South Bound 5s.....	112½	...	...
Augusta Ry. & Elec. Co. 5s.....	100	...	...

Miscellaneous Bonds.	Par.	Bid.	Asked
Mt. V. & Woodby's Cot. Duck 5s.....	83	85	...
Mt. V. & Woodby's Cot. Duck Inc.....	49	49½	...
G. B. & S. Brewing 1st 3-4s.....	53½	53½	...
G. B. & S. Brewing 2d Income.....	43½	44	...
United Elec. Light & Power 4½s.....	86	87	...
Atlanta Gaslight 1st 5s, 1947.....	104	...	...
Consolidated Gas 6s, 1910.....	112	...	...
Consolidated Gas 5s, 1939.....	114	115	...

### SOUTHERN COTTON MILL STOCKS

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for  
Week Ending July 29.

Abbeville Cotton Mills (S. C.).....	Bid.	Asked
Alken Mfg. Co. (S. C.).....	86	93
American Spinning Co. (S. C.).....	106	...
American Cotton Mills (S. C.).....	119	126
Arkwright Mills (S. C.).....	115	125
Augusta Factory (Ga.).....	63	71
Avondale Mills (Ala.).....	82½	...
Belton Mills (S. C.).....	101	...
Bennettsville Mfg. Co. (S. C.).....	81	...
Bibb Mfg. Co. (Ga.).....	110	...
Cabarrus Cotton Mills (N. C.).....	122	...
Clearwater Mfg. & Mfg. Co. (Ga.).....	103	...
Clifton Mfg. Co. (S. C.).....	177½	...
Clinton Cotton Mills (S. C.).....	115	...
Courtenay Mfg. Co. (S. C.).....	122	130
Dallas Mfg. Co. (Ala.).....	73	...
Darlington Mfg. Co. (S. C.).....	85	...
Eagle & Phenix Mills (Ga.).....	90	...
Enoree Mfg. Co. (S. C.).....	80	...
Enterprise Mfg. Co. (Ga.).....	84	92
Exposition Cotton Mills (Ga.).....	150	...
Gaffney Mfg. Co. (S. C.).....	101½	...
Granby Cotton Mills (S. C.).....	91	...
Granby Cot. Mills (S. C.) 1st Pfd.....	101	...
Graniteville Mfg. Co. (S. C.).....	150	162½
Greenwood Cotton Mills (S. C.).....	102	...
Grendel Mills (S. C.).....	102	...
Henrietta Mills (N. C.).....	200	...
King, John F. Mfg. Co. (Ga.).....	87½	...
Langley Mfg. Co. (S. C.).....	110	110
Laurens Cotton Mills (S. C.).....	145	152
Lockhart Mills (S. C.).....	104	...
Louise Mills (N. C.).....	101	...
Mayo Mills (N. C.).....	140	...

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Richland Cotton Mills (S. C.) Pfd.....	100
Sibley Mfg. Co. (Ga.).....	65
Southern Cotton Mills (N. C.).....	90
Spartan Mills (S. C.).....	130
Trion Mfg. Co. (Ga.).....	125
Tucapau Mills (S. C.).....	130
Union Cotton Mills (S. C.).....	148
Union Cotton Mills (S. C.) Pfd.....	100
Victor Mfg. Co. (S. C.).....	115
Warren Mfg. Co. (S. C.).....	95
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[For Additional Financial News, See  
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See